



VESTAS ENVENTUS V162-6.8 / 7.2 MW MIT 169 M NABENHÖHE,
WINDZONE S, 25 JAHRE ENTWURFSLEBENSDAUER

Gutachtliche Stellungnahme für Lastannahmen zur Turmberechnung der Vestas Turbinen

Vestas Wind Systems A/S

Report No.: L-08867-A052-0B

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Projektname: Vestas EnVentus V162-6.8 / 7.2 MW mit 169 m DNV Energy Systems
 Nabenhöhe, Renewables Certification
 Windzone S, 25 Jahre Entwurfslebensdauer Germanischer Lloyd Industrial
 Titel: Gutachtliche Stellungnahme für Lastannahmen zur Services GmbH
 Turmberechnung der Vestas Turbinen Brooktorkai 18
 Kunde: Vestas Wind Systems A/S, Hedeager 42, 8200 Aarhus N 20457 Hamburg
 Kontaktperson: Shereef Kather Germany
 Erstellungsdatum: 2022-06-24 Tel.: +49 40 36149-0
 Projekt - Nr.: 10367766
 Bericht - Nr.: L-08867-A052-0B
 Geltender Vertrag für diesen Bericht: 233187-SFA-20220613

Objective:

Gutachterliche Stellungnahme für Lastannahmen zur Turmberechnung der Vestas EnVentus V162-6.8 / 7.2 MW mit 169 m Nabenhöhe (Entwurfslebensdauer 25 Jahre) für Windzone S.

Der gegebene Turmname ist HA2A90A.

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Schlüsselwörter:

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Anlage A PRÜFUNTERLAGEN



1 ZUSAMMENFASSUNG

Die aufgeführten Lastannahmen werden für die Windenergieanlagen EnVentus V162-6.8 / 7.2 MW der Firma Vestas mit einer Nabenhöhe von 169 m, für DIBt S angenommen.

Die Richtigkeit der vorgelegten Lasten, sowie die Übereinstimmung der Lasten mit den Anforderungen der DIBt "Richtlinie für Windenergieanlagen, Einwirkungen und Standsicherheitsnachweise für Turm und Gründung", Fassung Oktober 2012 wurden anhand von Plausibilitätsprüfungen unter Berücksichtigung der dimensionierenden Eingangsdaten geprüft und soweit vorliegend bestätigt.

2 ZERTIFIZIERUNGSSHEMA (NORMEN UND RICHTLINIEN)

Document No.	Title
DIBt-Richtlinie: 2012-10	Richtlinie für Windenergieanlagen Einwirkungen und Standsicherheitsnachweise für Turm und Gründung

3 PRÜFUNTERLAGEN

Die Unterlagen für die Windenergieanlage EnVentus V162-6.8 / 7.2 MW mit 169 m Nabenhöhe der Firma Vestas sind in Anlage 1 aufgeführt.

4 BEWERTUNGSGRUNDLAGEN

4.1 Umweltbedingungen für die Lastannahmen

Die Windbedingungen der Vestas EnVentus V162-6.8 / 7.2 MW Turbinen mit 169 m Nabenhöhe sind entsprechend der Windklasse S gemäß DIBt 2012 angesetzt.

Jahresmittel der Windgeschwindigkeit in Nabenhöhe	EnVentus V162-6.8 / 7.2 MW mit 169 m Nabenhöhe HA2A90A DIBt S 7,5 m/s für 6,8MW 7,0 m/s für 7,2MW
Weibull k-Parameter	2
50-Jahres-Wind, V_{m50} (10 min) in Nabenhöhe	37,60 m/s
1-Jahres-Wind, V_{m1} (10 min) in Nabenhöhe	30,10 m/s
Luftdichte	1,225kg/m ³
Geländeneigung	8°
Geländerauigkeitsexponent (normale Bedingungen)	0,27
Geländerauigkeitsexponent (extreme Bedingungen)	0,11
Umgebungsturbulenzintensität nach IEC 61400-1 für NTM	Siehe Tabelle 1
Umgebungsturbulenzintensität I_{ref} nach IEC 61400-1 für ETM	0,16
Lastsicherheitsbeiwert für DLC8.1 (Sicherheitsklasse S)	$\gamma_F = 1,35$
Erdbebenzone	Erdbebenzone 3; Bedeutungskategorie II, Baugrundklassen A, B, C mit den geologischen Untergrundklassen R, T, S nach DIN EN 1998-1/NA:2011-01 Tabelle NA.4

Wind Geschwindigkeit [m/s]	NTM Fatigue [-]	NTM Extreme [-]
2	0,560	0,462
4	0,340	0,280
6	0,281	0,219
8	0,243	0,189
10	0,216	0,170



12	0,168	0,158
14	0,147	0,150
16	0,136	0,143
18	0,129	0,138
20	0,124	0,134
22	0,122	0,131
24	0,118	0,128
26	0,116	0,126
28	0,114	0,124
30	0,112	0,122
32	0,110	0,120
34	0,109	0,119
36	0,108	0,118
41	0,105	0,114

Tabelle 1 Turbulenzintensität für NTM.

Der Einfluss der Turbulenzintensität aufgrund der Nachlaufströmung benachbarter Anlagen ist in den o.g. Angaben nicht berücksichtigt.

4.2 Anlagedaten für die Lastannahmen

Nennleistung	EnVentus V162-6.8 / 7.2 MW mit 169 m Nabenhöhe HA2A90A
Rotordurchmesser	DIBt S
Einschaltgeschwindigkeit	6,8 MW / 7,2 MW
Nennwindgeschwindigkeit	162 m
Abschaltgeschwindigkeit	3,0 m/s
Nennrotordrehzahl	11,0 m/s / 11,4 m/s
Nabenhöhe	25,0 m/s
Stahl-Beton Hybrid Turm mit 1. Biegeeigenfrequenz mit	9,18 rpm / 9,57 rpm
Steifer Einspannung	169 m
Weicher Einspannung	0,196 Hz
Rechnerische Lebensdauer	0,193 Hz
Version des Reglers	25 Jahre
	1

4.3 Gültigkeit für die Lastannahmen

Eigenfrequenzbereich des Turmes	von 0,183 Hz bis 0,206 Hz
Dynamischen Drehfedersteifigkeit des Gesamtsystems aus Boden und Fundament	≥ 200 GNm/rad, siehe Tabelle 5.1 in Dokument [5]
Mindestabständen von Windturbinen zu einander, solange die folgenden Bedingungen laut Kapitel 7.3.3 der DIBt-Richtlinie erfüllt sind.	Der Abstand der Turmachsen benachbarter Windenergieanlagen darf den 8-fachen Rotor-durchmesser für $V_{m50} \leq 40$ m/s auf Nabenhöhe nicht unterschreiten. Der Abstand der Turmachsen benachbarter Windenergieanlagen darf den 5-fachen Rotor-durchmesser für $V_{m50} \geq 45$ m/s auf Nabenhöhe nicht unterschreiten. Zwischenwerte von V_{m50} ist der Abstand linear zu interpolieren.

5 PRÜFBEMERKUNGEN FÜR DIE LASTANNAHMEN

Extremlastfälle:

Die Übereinstimmung der Extremlastfälle wurde mit der DIBt-Richtlinie „Richtlinie für Windenergieanlagen: Einwirkungen und Standsicherheitsnachweise für Turm und Gründung“, Oktober 2012 bei Anwendung standortspezifischer Windbedingungen geprüft. Die Extremlasten sind in den Vestas Wind System A/S Berichten gemäß DIBt-Richtlinie einschließlich Lastsicherheitsbeiwerten aufgeführt.



Erdbebenlasten wurden nach DIN EN 1998-1/2010-10 und NA/2011-01 für die Untergrundverhältnisse nach Tabelle NA.4 im nationalen Anhang zur DIN EN 1998-1 berechnet und geprüft.

Betriebsfestigkeit:

Die Lastannahmen für den Betriebsfestigkeitsnachweis basieren auf die DIBt-Richtlinie: „Richtlinie für Windenergieanlagen; Einwirkungen und Standsicherheitsnachweise für Turm und Gründung“; Fassung Oktober 2012. Die Lastkollektive wurden mit dem Vestas Turbinen Simulator (VTS), Version VTS002, des aeroelastischen PC-Programmes Flex5 berechnet und für den Turmkopf, den Turmfuß sowie für unterschiedliche Turmschnitte angegeben. Die Fundamentlasten sind gesondert im Dokument [5] aufgeführt.

Die Berechnung der Betriebsfestigkeitslasten wurde unter Berücksichtigung eines dreidimensionalen Turbulenzfeldes durchgeführt.

5.1 OFFENE PUNKTE

Die Turmzeichnung wurde weder bei DNV eingereicht noch bewertet. Aus diesem Grund muss die statische Abbildung des Turms im Lastmodell zusammen mit der Turmbewertung verifiziert werden.

6 SCHLUSSBEMERKUNG

Die aufgeführten Lastannahmen werden für die Windenergieanlagen EnVentus V162-6.8 / 7.2 MW der Firma Vestas mit einer Nabenhöhe von 169 m, für DIBt S angenommen.

Wirbelerregte Querschwingungen auf die Turmlasten wurden nicht berücksichtigt. Einwirkungen daraus sollten bei der Turmauslegung betrachtet werden. Das Inbetriebnahmehandbuch muss die Verhinderung unzulässiger Turmschwingungen, wie von Vestas definiert, beschreiben. Die Transportlasten wurden nicht berücksichtigt.

Erdbebenlasten wurden nach DIN EN 1998-1/2010-10 und NA/2011-01 berechnet und geprüft, siehe Abschnitt 4.1 (Umweltbedingungen).

Es wurden keine Ride-Through Lastfälle (Stützung der Netzspannung durch Windenergieanlagen bei Netzstörung) bei Spannungsabfall definiert oder berechnet. Ride-Through Lastfälle bei Spannungsabfall sind nicht Bestandteil dieses Gutachtens.

Turmzeichnungen lagen für die Prüfung nicht vor. Die Überprüfung des Turm-Simulationsmodells zur Berechnung der Betriebsfestigkeits- und Extremlasten wurde mittels Vergleich zu den Turmmodelldaten im Turmdokument [4] vollzogen.

Die Lasten sind gültig für die in Abschnitt 4 sowie im folgenden gelisteten Bedingungen:

- Beiträge aus Eigengewichtsmomenten aufgrund von Schiefstellung der Turmachse sind nicht in den ausgewiesenen Lasten enthalten. Diese Lasten müssen später den extremalen Auslegungslasten für Turm- und Gründung gemäß Anforderungen in DIBt [1], Abschnitt 7.4.1 hinzugefügt werden.
- die aufgeführten Windgeschwindigkeiten in Abschnitt 4.1 müssen die Windgeschwindigkeiten gemäß DIN EN1991-1-4/NA abdecken.
- Dass sich das Lastniveau bei gleichen externen Bedingungen nach dem Typenzertifizierungsprozess (Validierung der Lastannahmen durch Lastmessungen) nicht erhöht.

Die Richtigkeit der vorgelegten Lasten, sowie die Übereinstimmung der Lasten mit den Anforderungen der DIBt "Richtlinie für Windenergieanlagen, Einwirkungen und Standsicherheitsnachweise für Turm und Gründung", Fassung



Oktober 2012 wurden anhand von Plausibilitätsprüfungen unter Berücksichtigung der dimensionierenden Eingangsdaten geprüft und soweit vorliegend bestätigt.



ANLAGE A

PRÜFUNTERLAGEN

Prüfung der Vestas EnVentus V162-6.8 / 7.2 MW mit 169 m Nabenhöhe, Windzone S

Beschreibung der geprüften EnVentus V162-6.8 / 7.2 MW Windenergieanlage

Die EnVentus V162-6.8 / 7.2 MW ist eine mit Getriebe und Dauermagnet Synchrongenerator ausgestattete, pitch geregelte, luv seitig angeströmte Windenergieanlage, mit variabler Rotorgeschwindigkeit. Die EnVentus V162-6.8 / 7.2 MW unterstützt 2 Leistungslevel, 6,8 MW und 7,2 MW. Die hier geprüfte Variante hat einen Stahl-Beton Hybrid Turm mit einer Nabenhöhe von 169m. Die Lasten wurden nach DIBt Klasse S geprüft.

Schnittstelle zu anderen Gewerken:

Beiträge aus Eigengewichtsmomenten aufgrund von Schiefstellung der Turmachse sind nicht in den ausgewiesenen Lasten enthalten. Diese Lasten müssen später den extremalen Auslegungslasten für Turm- und Gründung gemäß Anforderungen in DIBt [1], Abschnitt 7.4.1 hinzugefügt werden.

Turmzeichnungen lagen für die Prüfung nicht vor. Die Überprüfung des Turm-Simulationsmodells zur Berechnung der Betriebsfestigkeits- und Extremlasten wie Turmdokument [4] angegeben muss später bei Vorlage der Zeichnung überprüft werden.

Basis der Prüfung

Angewandte Normen und Richtlinien:

Document No.	Revision	Title
[1] DIBt	2012	Richtlinie für Windenergieanlagen

Die Prüfung der Lasten basiert auf:

Document No.	Revision	Title
[2] 0086-8845	06	IEC 61400-1 and DIBt 2012 Vestas design load case interpretations - Generic document

Prüfunterlagen

Liste der Dokumente:

Dokumenten Nr.	Revision	Titel
[3] 0122-3112	00	Combine Load Spectrum (15 Seiten) EV162-6.8/7.2MW, Mk1B, WZ2GK2(S), 169m, 50/60Hz, GS
[4] 0121-5839	01	Combine Tower Loads (50 Seiten) – HA2A90A, EV162-6.8/7.2MW, Mk1B, WZ2GK2(S), 169m, 50/60Hz, GS
[5] 0122-8671	01	Combine Foundation Loads (282 Seiten) – HA2A90A, EV162-6.8/7.2MW, Mk1B, WZ2GK2(S), 169m, 50/60Hz, GS



Zeichnungen (informativ):

Dokumenten Nr.	Revision	Titel
Nicht verfügbar		Hybrid Turm HA2A90A EV162-6.8/7.2MW, EnVentus, DIBt (S), 169m

Referenzdokumente (informativ):

Dokumenten Nr.	Revision	Titel
[6] 0106-8091	01	Design Basis Enventus MK1B/C
[7] 0122-5906	01	Installation and Maintenance Loads – HA2A90A, EV162-6.8/7.2MW, Mk1B, WZ2GK2(S), 169m, 50/60Hz, GS
[8] 0122-0639	00	Load Extrapolation EV162-6.8/7.2MW, Mk1B, HH169m
[9] 0112-2952	00	Turbine Configurations & Operational Properties – EnVentus MK1B/C



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CLASS T05



Document:
0122-8671 VER 00

Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90A

Combine Foundation loads – HA2A90A

EV162-6.8/7.2 MW, Mk1B, WZ2GK2(S), 169 m

50/60 Hz, GS



QMS 00091 VER 00

Document:
0122-8671 VER 00

Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90A

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Version History

VERSION:	DATE:	CHANGE:
00	2022.05.01	New document.
01	2022.05.03	Fix typo in Table 1-2 and valid frequency range.

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Document:
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Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90A

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1. Introduction

This document presents the foundation loads from the EV162-6.8/7.2 MW, GS, HH 169, WZ2GK2(S) HA2A90A load spectrum. The loads are simulated in accordance with DIBt - Richtlinie für Windenergieanlagen Ed. October 2012, ref. [A]. Tower used for calculating the loads can be found in ref. [B].

Reference	Description	Doc No.
[A]	DIBt - Richtlinie für Windenergieanlagen Ed. October 2012	
[B]	Tower drawing	N/A

Table 1-1 Reference to documents.

Ref.	Simulation Path
[1]	EV162 6.8MW DIBt HH169 20yrs HA2A90A soft
[2]	EV162 6.8MW DIBt HH169 20yrs HA2A90A stiff
[3]	EV162 6.8MW DIBt HH169 25yrs HA2A90A soft
[4]	EV162 6.8MW DIBt HH169 25yrs HA2A90A stiff
[5]	EV162 7.2MW DIBt HH169 20yrs HA2A90A soft
[6]	EV162 7.2MW DIBt HH169 20yrs HA2A90A stiff
[7]	EV162 7.2MW DIBt HH169 25yrs HA2A90A soft
[8]	EV162 7.2MW DIBt HH169 25yrs HA2A90A stiff

Table 1-2 Reference to simulations.

2. Extreme loads

Foundation loads components at the instant of extreme resulting bending moment are given in beneath table. Own weight moment contribution due to tower out of vertical is not included.

Loads are given at height: 2.62m

Mbt1: Resulting bending moment. $\text{SQRT}(\text{Mxt1}^2 + \text{Myt1}^2)$ (also M_{res})
Lead LC/Family

Characteristic Extreme								
Lead	LC/Family	PLF	Type	Mbt	Mzt	FndFr	Fzt	Ref
Sensor	[-]	[-]	[-]	[kNm]	[kNm]	[kN]	[kN]	[-]
Mbt	23CoEogvra80(fam187)	1.10	Abs	273800	-1362	1971	-19608	[1]
Mzt	43ETMRSHWO100(fam293)	1.35	Abs	59708	-12496	601.6	-19583	[1]
FndFr	1316etm00(fam89)	1.35	Abs	206800	-2088	2311	-19739	[8]
Fzt	61E50a00000(fam308)	1.50	Abs	39976	997.4	422.0	-19559	[5]

Table 2-1 Characteristic Extreme (excl. PLF). Load cases sorted with PLF.

Characteristic Extreme								
Lead	LC/Family	PLF	Type	Mbt	Mzt	FndFr	Fzt	Ref
Sensor	[-]	[-]	[-]	[kNm]	[kNm]	[kN]	[kN]	[-]
Mbt	23CoEogvra80(fam187)	1.10	Abs	273800	-1362	1971	-19608	[1]
Mzt	22VOGVVo00(fam170)	1.10	Abs	29749	-12606	308.6	-19540	[1]
FndFr	1316etm00(fam89)	1.35	Abs	206800	-2088	2311	-19739	[8]
Fzt	12IceUHW0100(fam76)	1.35	Abs	90420	2335.6	602.8	-19961	[1]

Table 2-2 Characteristic Extreme (excl. PLF). Load cases sorted without PLF.

Characteristic Extreme								
Lead	LC/Family	PLF	Type	Mbt	Mzt	FndFr	Fzt	Ref
Sensor	[-]	[-]	[-]	[kNm]	[kNm]	[kN]	[kN]	[-]
Mbt	23CoEogvra80(fam187)	1.10	Abs	273800	-1362	1971	-19608	[1]
Mzt	22VOGVVo00(fam170)	1.10	Abs	29749	-12606	308.6	-19540	[1]
FndFr	23CoEogvra80(fam187)	1.10	Abs	271200	-1142	2060	-19584	[2]
Fzt	23CoEogvra30(fam182)	1.10	Abs	235200	568.7	1404.6	-19890	[1]

Table 2-3 Characteristic Extreme (excl. PLF). Only load cases with PLF = 1.10.

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Foundation loads – EV162-6.8/7.2MW HH169m HA2A90A

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Characteristic Extreme								
Lead	LC/Family	PLF	Type	Mbt	Mzt	FndFr	Fzt	Ref
Sensor	[-]	[-]	[-]	[kNm]	[kNm]	[kN]	[kN]	[-]
Mbt	1314etm00(fam88)	1.35	Abs	220000	-2008	2120	-19748	[6]
Mzt	43ETMRSHWO100(fam293)	1.35	Abs	59708	-12496	601.6	-19583	[1]
FndFr	1316etm00(fam89)	1.35	Abs	206800	-2088	2311	-19739	[8]
Fzt	12lceUHW0100(fam76)	1.35	Abs	90420	2335.6	602.8	-19961	[1]

Table 2-4 Characteristic Extreme (excl. PLF). Only load cases with PLF = 1.35.

3. Production loads

The production loads are calculated for the main sensors of the foundation. The following loads are calculated.

Char. load Characteristic Extreme (excl. PLF, Load cases sorted without PLF). Only load cases with PLF = 1.35 and 1.50 are included in the evaluation.

Prob.: 1e-2 Load level with an exceedance probability of 1e-2

Prob.: 1e-4 Load level with an exceedance probability of 1e-4

Production loads							
		Char. load	Prob.:1e-2	Prob.:1e-4	Ref		
M _{res}	[kNm]	220000.00	160644.66	185651.56	[6]	[4]	[2]
M _z	[kNm]	-12496.43	-4566.59	-6874.15	[1]	[6]	[2]
F _{res}	[kN]	2311.44	1177.77	1591.06	[8]	[2]	[2]
F _z	[kN]	-19960.54	-19821.24	-19866.77	[1]	[5]	[5]

Table 3-1 Production loads.

4. Fatigue loads

For the foundation, the mean loads have to be considered. The mean loads must be combined with either the equivalent loads or the fatigue load spectrum.

Loads are given at height: 2.62m

The equivalent loads given may be used only if the material property can be characterized by an S/N-curve with the same slope as given for the equivalent loads.

Equivalent and Mean Fatigue Foundation Loads							
		Mean load	Range m = 4	Range m = 7	Ref		
F _y	[kN]	461.45	1758.18	1544.84	[6]	[2]	[2]
M _x	[kNm]	-76590.61	112209.66	103536.63	[5]	[2]	[2]
M _z	[kNm]	-181.86	10206.96	9582.00	[5]	[5]	[5]

Table 4-1 Fatigue loads for N=1E7 cycles.

5. Stiffness of foundation

The tower loads have been calculated for a foundation stiffness of $C_{\varphi, \text{dyn}} = 1040 \text{ GNm/rad}$, corresponding to a nominal tower frequency of 0.196 Hz for the stiff tower (refs. [2], [4], [6] and [8]) and 0.193 Hz for the soft tower (refs. [1], [3], [5] and [7]) – these are gravity corrected values.

The spring stiffness of the foundation must be at least $C_{\varphi, \text{dyn}} \geq 200 \text{ GNm/rad}$ for the loads to be valid. Concurrent values for rotational and lateral stiffness of the foundation are given in Table 5-1 and Table 5-2.

Concurrent values for rotational and lateral stiffness										
Rotational stiffness	[GNm/rad]	200	312	425	538	650	762	875	988	1100
Lateral stiffness	[MN/m]	54.7	20.8	16.1	14.1	13.1	12.7	12.1	12.1	11.5

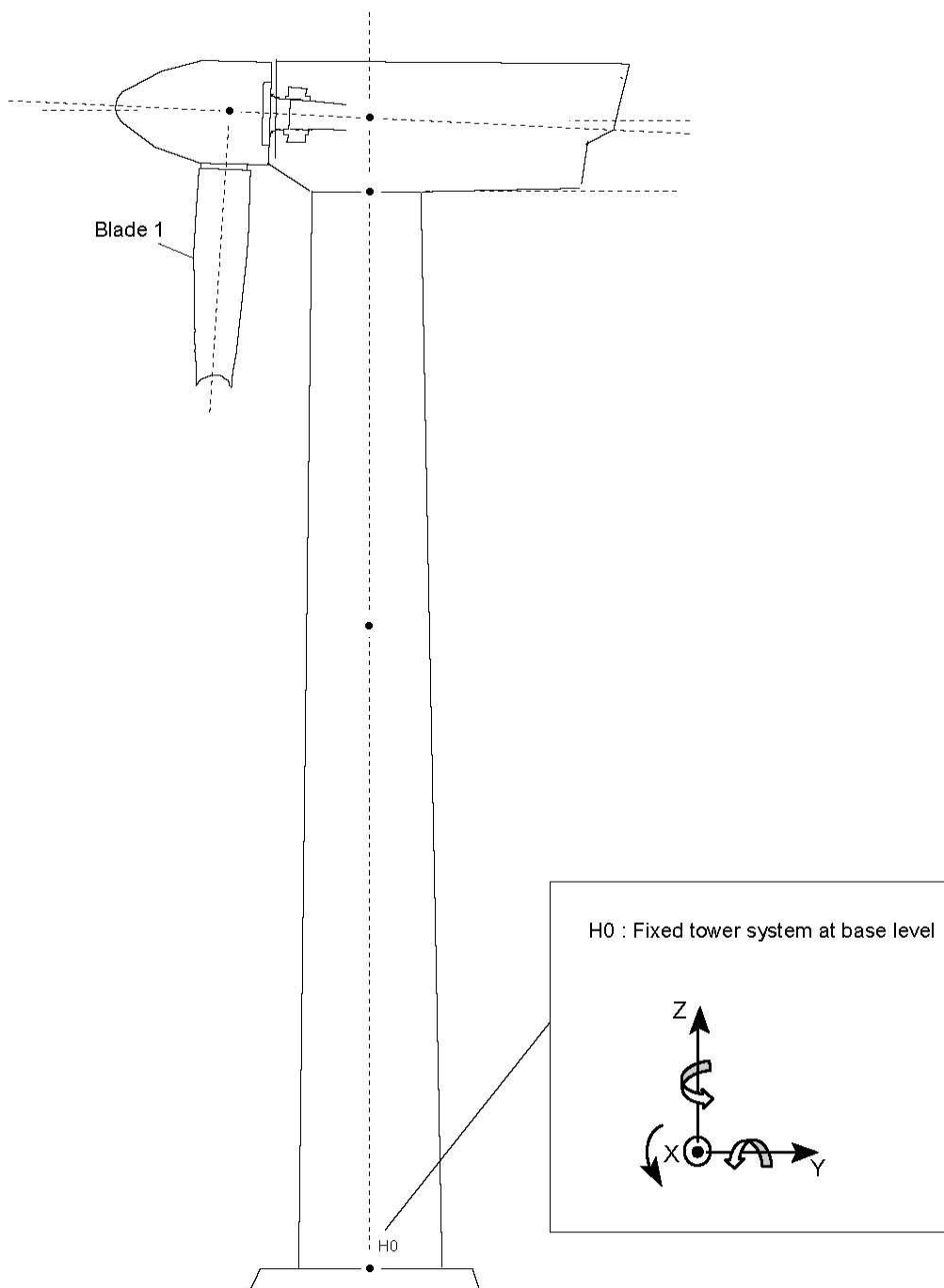
Table 5-1 Minimum lateral stiffness (stiff tower – refs. [2], [4], [6] and [8]).

Concurrent values for rotational- and lateral stiffness										
Rotational stiffness	[GNm/rad]	200	312	425	538	650	762	875	988	1100
Lateral stiffness	[MN/m]	54.7	19.6	15.4	13.8	12.9	12.3	11.8	11.8	11.3

Table 5-2 Minimum lateral stiffness (soft tower – refs. [1], [3], [5] and [7]).

The tower frequency varies between 0.190 Hz and 0.200 Hz for the stiff tower and between 0.187 Hz and 0.197 Hz for the soft tower, due to the foundation stiffness. Overall, the natural frequency of the tower must be within the frequency interval [0.183; 0.206] Hz ($\pm 5\%$) for the loads in this document to be valid.

Appendix A. Co-ordinate systems



Appendix B. Rain flow count

This appendix contains the rain flow spectrum for the shear force, the bending moment and the torsional moment in the bottom of the tower.

B.1 6.8MW, 20yrs lifetime, soft tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
3.0413E+03	1.2500E+00	3.4323E+05	6.7218E+00	2.6191E+04	4.4583E-02
2.9197E+03	1.9809E+01	3.2950E+05	7.8972E+00	2.5143E+04	0.0000E+00
2.7980E+03	2.5958E+02	3.1577E+05	1.7308E+01	2.4096E+04	4.4583E-02
2.6764E+03	2.8998E+03	3.0204E+05	4.4372E+01	2.3048E+04	8.9167E-02
2.5547E+03	4.3294E+03	2.8831E+05	4.6442E+01	2.2000E+04	1.3375E-01
2.4331E+03	8.9795E+03	2.7458E+05	6.2219E+01	2.0953E+04	8.4075E+01
2.3114E+03	1.7079E+04	2.6085E+05	6.7109E+01	1.9905E+04	5.2530E+00
2.1898E+03	3.9386E+04	2.4713E+05	6.7173E+01	1.8858E+04	5.4836E+01
2.0681E+03	5.9269E+04	2.3340E+05	6.3937E+01	1.7810E+04	2.9079E+02
1.9465E+03	1.2467E+05	2.1967E+05	9.6058E+01	1.6762E+04	6.3684E+02
1.8248E+03	2.4155E+05	2.0594E+05	7.2656E+02	1.5715E+04	3.2248E+03
1.7031E+03	5.1954E+05	1.9221E+05	3.3274E+03	1.4667E+04	2.0160E+04
1.5815E+03	8.9193E+05	1.7848E+05	7.2180E+03	1.3619E+04	1.2597E+05
1.4598E+03	1.5873E+06	1.6475E+05	2.4654E+04	1.2572E+04	3.3930E+05
1.3382E+03	2.8621E+06	1.5102E+05	6.4948E+04	1.1524E+04	6.2883E+05
1.2165E+03	5.0804E+06	1.3729E+05	1.6595E+05	1.0476E+04	7.7563E+05
1.0949E+03	8.5902E+06	1.2356E+05	4.1183E+05	9.4288E+03	1.1468E+06
9.7323E+02	1.4252E+07	1.0983E+05	1.0837E+06	8.3811E+03	2.1478E+06
8.5157E+02	2.2316E+07	9.6104E+04	2.6407E+06	7.3335E+03	5.2807E+06
7.2992E+02	3.3019E+07	8.2375E+04	6.3546E+06	6.2859E+03	1.1879E+07
6.0827E+02	4.4516E+07	6.8646E+04	1.4870E+07	5.2382E+03	2.3765E+07
4.8661E+02	5.7749E+07	5.4917E+04	3.4715E+07	4.1906E+03	4.0962E+07
3.6496E+02	7.6290E+07	4.1188E+04	6.9464E+07	3.1429E+03	6.3264E+07
2.4331E+02	1.1934E+08	2.7458E+04	1.2546E+08	2.0953E+03	8.1699E+07
1.2165E+02	3.1098E+08	1.3729E+04	1.9398E+08	1.0476E+03	1.7242E+08

Table 5-3 Rainflow counting spectra, issued from [1].

B.2 6.8MW, 20yrs lifetime, stiff tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
3.1840E+03	6.2500E-01	3.4035E+05	5.3774E+00	2.3827E+04	4.4583E-02
3.0566E+03	4.1250E+00	3.2673E+05	9.2415E+00	2.2874E+04	4.4583E-02
2.9293E+03	1.1406E+03	3.1312E+05	2.3091E+01	2.1921E+04	1.3375E-01
2.8019E+03	1.9204E+03	2.9950E+05	4.2089E+01	2.0968E+04	8.3495E+01
2.6745E+03	2.5619E+03	2.8589E+05	4.6806E+01	2.0015E+04	3.4920E+00
2.5472E+03	4.2623E+03	2.7228E+05	6.8399E+01	1.9062E+04	5.4060E+01
2.4198E+03	1.1844E+04	2.5866E+05	6.6471E+01	1.8109E+04	1.1784E+02
2.2925E+03	3.3967E+04	2.4505E+05	6.3951E+01	1.7156E+04	5.4339E+02
2.1651E+03	5.2847E+04	2.3143E+05	6.4794E+01	1.6203E+04	5.7321E+02
2.0378E+03	9.3592E+04	2.1782E+05	1.2519E+02	1.5250E+04	6.6643E+03
1.9104E+03	2.0652E+05	2.0421E+05	2.1456E+03	1.4296E+04	3.2585E+04
1.7830E+03	4.1831E+05	1.9059E+05	3.5848E+03	1.3343E+04	1.5051E+05
1.6557E+03	7.2517E+05	1.7698E+05	1.0827E+04	1.2390E+04	3.3701E+05
1.5283E+03	1.3329E+06	1.6337E+05	3.3565E+04	1.1437E+04	5.9973E+05
1.4010E+03	2.4463E+06	1.4975E+05	8.7017E+04	1.0484E+04	6.8191E+05
1.2736E+03	4.3654E+06	1.3614E+05	2.0878E+05	9.5310E+03	1.0134E+06
1.1462E+03	7.7542E+06	1.2252E+05	5.2717E+05	8.5779E+03	1.6473E+06
1.0189E+03	1.2850E+07	1.0891E+05	1.3049E+06	7.6248E+03	3.6968E+06
8.9152E+02	2.0487E+07	9.5297E+04	3.0279E+06	6.6717E+03	7.7953E+06
7.6416E+02	3.1474E+07	8.1683E+04	7.1347E+06	5.7186E+03	1.5725E+07
6.3680E+02	4.3797E+07	6.8069E+04	1.6495E+07	4.7655E+03	2.7698E+07
5.0944E+02	5.6605E+07	5.4455E+04	3.6488E+07	3.8124E+03	4.3587E+07
3.8208E+02	7.5377E+07	4.0841E+04	7.0889E+07	2.8593E+03	6.3391E+07
2.5472E+02	1.1750E+08	2.7228E+04	1.2448E+08	1.9062E+03	7.6364E+07
1.2736E+02	3.1131E+08	1.3614E+04	1.8621E+08	9.5310E+02	1.7252E+08

Table 5-4 Rainflow counting spectra, issued from [2].

B.3 6.8MW, 25yrs lifetime, soft tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
2.8842E+03	2.3054E+00	3.3045E+05	6.7216E+00	2.2418E+04	5.5625E-02
2.7689E+03	4.0414E+00	3.1723E+05	1.8273E+01	2.1521E+04	0.0000E+00
2.6535E+03	5.4501E+01	3.0401E+05	2.5064E+01	2.0624E+04	5.5625E-02
2.5381E+03	1.6655E+03	2.9079E+05	5.2926E+01	1.9727E+04	3.5277E+00
2.4228E+03	2.0015E+03	2.7758E+05	7.8196E+01	1.8831E+04	1.1813E+00
2.3074E+03	8.3552E+03	2.6436E+05	7.5634E+01	1.7934E+04	1.0610E+02
2.1920E+03	1.2048E+04	2.5114E+05	6.8953E+01	1.7037E+04	8.8606E+01
2.0767E+03	3.5671E+04	2.3792E+05	6.6507E+01	1.6141E+04	1.9461E+02
1.9613E+03	5.1499E+04	2.2470E+05	6.0954E+01	1.5244E+04	2.8005E+03
1.8459E+03	1.0303E+05	2.1149E+05	6.9764E+01	1.4347E+04	2.3523E+04
1.7305E+03	1.8792E+05	1.9827E+05	2.2168E+02	1.3451E+04	7.7540E+04
1.6152E+03	4.9761E+05	1.8505E+05	1.4227E+03	1.2554E+04	2.3559E+05
1.4998E+03	8.6308E+05	1.7183E+05	4.5970E+03	1.1657E+04	4.9155E+05
1.3844E+03	1.5477E+06	1.5862E+05	1.6225E+04	1.0760E+04	6.9997E+05
1.2691E+03	2.9300E+06	1.4540E+05	4.9825E+04	9.8637E+03	7.3786E+05
1.1537E+03	5.2704E+06	1.3218E+05	1.3520E+05	8.9670E+03	1.2278E+06
1.0383E+03	9.3772E+06	1.1896E+05	3.9241E+05	8.0703E+03	2.1052E+06
9.2296E+02	1.5454E+07	1.0574E+05	1.0236E+06	7.1736E+03	4.3710E+06
8.0759E+02	2.5536E+07	9.2526E+04	2.5812E+06	6.2769E+03	9.2332E+06
6.9222E+02	3.9370E+07	7.9308E+04	6.1843E+06	5.3802E+03	1.8610E+07
5.7685E+02	5.4444E+07	6.6090E+04	1.5690E+07	4.4835E+03	3.2858E+07
4.6148E+02	7.1864E+07	5.2872E+04	3.8109E+07	3.5868E+03	5.2406E+07
3.4611E+02	9.6037E+07	3.9654E+04	8.2989E+07	2.6901E+03	7.8390E+07
2.3074E+02	1.5225E+08	2.6436E+04	1.5782E+08	1.7934E+03	9.6233E+07
1.1537E+02	3.8679E+08	1.3218E+04	2.4965E+08	8.9670E+02	2.1141E+08

Table 5-5 Rainflow counting spectra, issued from [3].

B.4 6.8MW, 25yrs lifetime, stiff tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
2.9218E+03	2.4306E+00	3.3728E+05	3.3608E+00	2.2057E+04	5.5625E-02
2.8049E+03	1.7468E+01	3.2379E+05	1.4913E+01	2.1174E+04	0.0000E+00
2.6881E+03	1.4464E+03	3.1030E+05	2.4995E+01	2.0292E+04	1.1125E-01
2.5712E+03	1.6373E+03	2.9681E+05	4.9916E+01	1.9410E+04	3.6389E+00
2.4543E+03	4.0049E+03	2.8332E+05	6.2166E+01	1.8528E+04	1.0584E+02
2.3375E+03	7.8984E+03	2.6983E+05	6.4672E+01	1.7645E+04	2.0512E+01
2.2206E+03	1.6308E+04	2.5633E+05	8.9651E+01	1.6763E+04	3.4387E+02
2.1037E+03	3.5521E+04	2.4284E+05	6.6685E+01	1.5881E+04	4.6606E+02
1.9868E+03	5.8929E+04	2.2935E+05	6.3083E+01	1.4999E+04	6.1937E+03
1.8700E+03	1.1740E+05	2.1586E+05	7.9679E+01	1.4116E+04	3.1985E+04
1.7531E+03	2.1898E+05	2.0237E+05	9.2906E+02	1.3234E+04	1.0323E+05
1.6362E+03	4.9569E+05	1.8888E+05	1.3528E+03	1.2352E+04	2.9971E+05
1.5193E+03	8.7808E+05	1.7539E+05	4.6491E+03	1.1469E+04	4.9508E+05
1.4025E+03	1.6435E+06	1.6190E+05	1.8789E+04	1.0587E+04	7.0670E+05
1.2856E+03	2.9279E+06	1.4840E+05	5.0882E+04	9.7050E+03	7.8801E+05
1.1687E+03	5.3523E+06	1.3491E+05	1.3910E+05	8.8227E+03	1.2764E+06
1.0519E+03	9.2565E+06	1.2142E+05	3.8224E+05	7.9404E+03	2.3702E+06
9.3498E+02	1.5476E+07	1.0793E+05	1.0396E+06	7.0582E+03	4.7021E+06
8.1811E+02	2.5286E+07	9.4439E+04	2.5097E+06	6.1759E+03	9.9543E+06
7.0124E+02	3.7610E+07	8.0948E+04	6.5147E+06	5.2936E+03	1.9045E+07
5.8436E+02	5.4429E+07	6.7456E+04	1.5600E+07	4.4113E+03	3.3756E+07
4.6749E+02	7.0950E+07	5.3965E+04	3.7941E+07	3.5291E+03	5.3120E+07
3.5062E+02	9.5045E+07	4.0474E+04	8.2699E+07	2.6468E+03	7.8077E+07
2.3375E+02	1.4785E+08	2.6983E+04	1.5642E+08	1.7645E+03	9.4734E+07
1.1687E+02	3.8844E+08	1.3491E+04	2.4474E+08	8.8227E+02	2.1230E+08

Table 5-6 Rainflow counting spectra, issued from [4].

B.5 7.2MW, 20yrs lifetime, soft tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
2.8077E+03	1.2977E+01	3.3575E+05	1.3359E+00	2.6479E+04	5.3125E-02
2.6953E+03	3.0131E+01	3.2232E+05	5.3434E+00	2.5419E+04	0.0000E+00
2.5830E+03	5.7800E+02	3.0889E+05	1.6724E+01	2.4360E+04	0.0000E+00
2.4707E+03	7.8225E+02	2.9546E+05	3.1657E+01	2.3301E+04	5.3125E-02
2.3584E+03	1.8359E+03	2.8203E+05	6.9923E+01	2.2242E+04	1.0625E-01
2.2461E+03	5.2984E+03	2.6860E+05	7.3246E+01	2.1183E+04	1.0625E-01
2.1338E+03	1.5488E+04	2.5517E+05	6.2727E+01	2.0124E+04	8.3896E+01
2.0215E+03	2.8279E+04	2.4174E+05	5.1927E+01	1.9065E+04	1.3659E+01
1.9092E+03	5.7393E+04	2.2831E+05	8.3561E+01	1.8005E+04	1.7348E+02
1.7969E+03	1.0279E+05	2.1488E+05	9.9707E+01	1.6946E+04	6.7801E+02
1.6846E+03	2.6509E+05	2.0145E+05	1.1228E+02	1.5887E+04	2.7880E+03
1.5723E+03	4.7577E+05	1.8802E+05	9.4306E+02	1.4828E+04	2.2616E+04
1.4600E+03	8.8720E+05	1.7459E+05	3.7193E+03	1.3769E+04	9.7655E+04
1.3477E+03	1.6752E+06	1.6116E+05	1.0705E+04	1.2710E+04	3.5238E+05
1.2354E+03	3.0512E+06	1.4773E+05	4.1433E+04	1.1651E+04	6.0840E+05
1.1231E+03	5.2807E+06	1.3430E+05	1.1292E+05	1.0591E+04	7.2500E+05
1.0108E+03	8.9757E+06	1.2087E+05	3.0292E+05	9.5323E+03	1.1204E+06
8.9845E+02	1.4921E+07	1.0744E+05	7.5079E+05	8.4731E+03	2.1496E+06
7.8614E+02	2.4020E+07	9.4009E+04	1.9555E+06	7.4140E+03	5.1128E+06
6.7384E+02	3.4633E+07	8.0579E+04	4.9725E+06	6.3549E+03	1.1643E+07
5.6153E+02	4.7349E+07	6.7149E+04	1.2608E+07	5.2957E+03	2.3817E+07
4.4922E+02	6.1900E+07	5.3719E+04	3.2099E+07	4.2366E+03	4.1689E+07
3.3692E+02	8.1306E+07	4.0289E+04	6.9510E+07	3.1774E+03	6.4894E+07
2.2461E+02	1.2596E+08	2.6860E+04	1.3148E+08	2.1183E+03	8.2987E+07
1.1231E+02	3.3363E+08	1.3430E+04	2.0252E+08	1.0591E+03	1.7451E+08

Table 5-7 Rainflow counting spectra, issued from [5].

B.6 7.2MW, 20yrs lifetime, stiff tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
3.2448E+03	1.0625E-01	3.3857E+05	1.3359E+00	2.4361E+04	5.3125E-02
3.1150E+03	0.0000E+00	3.2503E+05	5.3434E+00	2.3386E+04	0.0000E+00
2.9852E+03	6.2500E-01	3.1149E+05	1.6724E+01	2.2412E+04	5.3125E-02
2.8554E+03	1.7666E+02	2.9794E+05	3.2164E+01	2.1438E+04	1.0625E-01
2.7256E+03	3.1667E+02	2.8440E+05	6.3296E+01	2.0463E+04	8.3467E+01
2.5959E+03	9.4147E+02	2.7086E+05	7.5865E+01	1.9489E+04	1.2908E+01
2.4661E+03	1.1990E+03	2.5731E+05	7.0922E+01	1.8514E+04	1.3885E+02
2.3363E+03	7.1153E+03	2.4377E+05	4.9226E+01	1.7540E+04	1.1059E+02
2.2065E+03	1.7712E+04	2.3023E+05	8.0535E+01	1.6565E+04	1.0653E+03
2.0767E+03	3.1482E+04	2.1669E+05	7.5020E+01	1.5591E+04	2.9547E+03
1.9469E+03	7.6726E+04	2.0314E+05	4.1781E+02	1.4617E+04	2.6447E+04
1.8171E+03	1.8722E+05	1.8960E+05	8.2045E+02	1.3642E+04	9.4813E+04
1.6873E+03	3.9591E+05	1.7606E+05	6.2136E+03	1.2668E+04	3.3816E+05
1.5575E+03	8.1229E+05	1.6251E+05	1.0342E+04	1.1693E+04	5.4995E+05
1.4277E+03	1.5160E+06	1.4897E+05	4.3618E+04	1.0719E+04	6.3836E+05
1.2979E+03	3.1221E+06	1.3543E+05	1.3959E+05	9.7443E+03	9.6274E+05
1.1681E+03	5.8570E+06	1.2189E+05	3.5355E+05	8.7699E+03	1.5364E+06
1.0383E+03	1.0386E+07	1.0834E+05	9.0454E+05	7.7955E+03	3.3118E+06
9.0855E+02	1.8662E+07	9.4800E+04	2.2843E+06	6.8210E+03	7.2001E+06
7.7876E+02	2.9866E+07	8.1257E+04	5.6671E+06	5.8466E+03	1.5336E+07
6.4896E+02	4.4107E+07	6.7714E+04	1.3990E+07	4.8722E+03	2.7563E+07
5.1917E+02	5.9946E+07	5.4171E+04	3.4065E+07	3.8977E+03	4.4401E+07
3.8938E+02	7.9896E+07	4.0629E+04	7.1335E+07	2.9233E+03	6.3596E+07
2.5959E+02	1.2293E+08	2.7086E+04	1.3021E+08	1.9489E+03	7.9236E+07
1.2979E+02	3.2859E+08	1.3543E+04	1.9400E+08	9.7443E+02	1.7425E+08

Table 5-8 Rainflow counting spectra, issued from [6].

B.7 7.2MW, 25yrs lifetime, soft tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
2.6299E+03	2.4415E+00	3.2609E+05	5.0088E+00	2.3236E+04	1.3292E-01
2.5247E+03	1.5675E+01	3.1305E+05	1.0018E+01	2.2307E+04	6.6460E-02
2.4195E+03	2.3050E+02	3.0001E+05	1.0098E+01	2.1377E+04	1.3292E-01
2.3143E+03	8.9472E+02	2.8696E+05	6.4757E+01	2.0448E+04	1.3292E-01
2.2091E+03	5.9866E+02	2.7392E+05	9.1765E+01	1.9519E+04	0.0000E+00
2.1039E+03	3.7357E+03	2.6088E+05	7.7067E+01	1.8589E+04	1.8690E+00
1.9987E+03	1.4722E+04	2.4783E+05	8.1167E+01	1.7660E+04	1.1192E+02
1.8935E+03	1.2601E+04	2.3479E+05	5.8274E+01	1.6730E+04	4.5529E+01
1.7883E+03	4.4164E+04	2.2174E+05	6.6627E+01	1.5801E+04	7.7871E+02
1.6831E+03	8.3516E+04	2.0870E+05	8.7894E+01	1.4871E+04	4.1517E+03
1.5779E+03	2.0221E+05	1.9566E+05	1.7354E+02	1.3942E+04	3.0378E+04
1.4727E+03	3.8386E+05	1.8261E+05	6.2339E+02	1.3012E+04	1.3244E+05
1.3675E+03	7.3979E+05	1.6957E+05	4.2913E+02	1.2083E+04	3.8234E+05
1.2623E+03	1.4612E+06	1.5653E+05	7.1667E+03	1.1153E+04	6.1900E+05
1.1571E+03	2.8531E+06	1.4348E+05	1.4128E+04	1.0224E+04	5.9341E+05
1.0519E+03	4.9843E+06	1.3044E+05	8.0155E+04	9.2946E+03	9.4236E+05
9.4675E+02	9.0956E+06	1.1739E+05	2.1516E+05	8.3651E+03	1.5907E+06
8.4155E+02	1.5360E+07	1.0435E+05	6.5649E+05	7.4356E+03	3.3082E+06
7.3636E+02	2.5544E+07	9.1306E+04	1.4903E+06	6.5062E+03	7.3470E+06
6.3116E+02	3.7913E+07	7.8263E+04	4.0346E+06	5.5767E+03	1.5645E+07
5.2597E+02	5.3690E+07	6.5219E+04	1.1093E+07	4.6473E+03	2.9180E+07
4.2078E+02	7.1624E+07	5.2175E+04	3.0937E+07	3.7178E+03	5.0312E+07
3.1558E+02	9.9896E+07	3.9131E+04	7.5362E+07	2.7884E+03	7.7648E+07
2.1039E+02	1.6247E+08	2.6088E+04	1.5912E+08	1.8589E+03	1.0007E+08
1.0519E+02	4.1335E+08	1.3044E+04	2.6543E+08	9.2946E+02	2.1169E+08

Table 5-9 Rainflow counting spectra, issued from [7].

B.8 7.2MW, 25yrs lifetime, stiff tower

Foundation Fatigue Load Spectrum					
Tower shear, bottom F_y [kN]		Tower bending, bottom M_x [kNm]		Tower torsion, bottom M_z [kNm]	
Range	Frequency	Range	Frequency	Range	Frequency
2.8576E+03	1.8165E+00	3.2928E+05	3.3392E+00	2.3901E+04	6.6460E-02
2.7433E+03	6.9146E-01	3.1611E+05	8.3480E+00	2.2945E+04	0.0000E+00
2.6290E+03	3.6760E+02	3.0294E+05	1.8607E+01	2.1989E+04	6.6460E-02
2.5147E+03	1.3454E+02	2.8977E+05	4.6863E+01	2.1033E+04	1.3292E-01
2.4004E+03	4.2133E+02	2.7660E+05	7.5974E+01	2.0077E+04	1.3292E-01
2.2861E+03	1.2629E+03	2.6342E+05	9.2777E+01	1.9121E+04	1.0424E+02
2.1718E+03	3.0034E+03	2.5025E+05	9.2928E+01	1.8165E+04	1.8690E+00
2.0575E+03	1.2326E+04	2.3708E+05	5.2110E+01	1.7208E+04	1.9334E+01
1.9432E+03	2.4237E+04	2.2391E+05	6.7436E+01	1.6252E+04	2.7440E+02
1.8289E+03	4.5006E+04	2.1074E+05	9.5248E+01	1.5296E+04	1.8862E+03
1.7146E+03	1.1458E+05	1.9757E+05	1.6682E+02	1.4340E+04	9.9223E+03
1.6003E+03	2.6109E+05	1.8440E+05	7.7638E+02	1.3384E+04	8.4833E+04
1.4860E+03	5.2643E+05	1.7123E+05	7.1899E+02	1.2428E+04	3.0380E+05
1.3717E+03	1.0583E+06	1.5805E+05	7.7545E+03	1.1472E+04	5.5406E+05
1.2574E+03	2.1034E+06	1.4488E+05	1.8760E+04	1.0516E+04	5.7513E+05
1.1431E+03	3.8554E+06	1.3171E+05	9.7947E+04	9.5603E+03	8.8339E+05
1.0288E+03	7.3129E+06	1.1854E+05	2.4550E+05	8.6042E+03	1.4197E+06
9.1445E+02	1.2901E+07	1.0537E+05	7.0334E+05	7.6482E+03	2.7887E+06
8.0014E+02	2.1861E+07	9.2199E+04	1.6889E+06	6.6922E+03	6.6751E+06
6.8584E+02	3.5244E+07	7.9027E+04	4.5925E+06	5.7362E+03	1.4243E+07
5.7153E+02	5.1117E+07	6.5856E+04	1.2736E+07	4.7801E+03	2.7786E+07
4.5722E+02	6.9023E+07	5.2685E+04	3.2687E+07	3.8241E+03	4.9164E+07
3.4292E+02	9.6886E+07	3.9514E+04	7.7510E+07	2.8681E+03	7.7806E+07
2.2861E+02	1.5644E+08	2.6342E+04	1.5665E+08	1.9121E+03	1.0162E+08
1.1431E+02	4.1212E+08	1.3171E+04	2.5566E+08	9.5603E+02	2.1341E+08

Table 5-10 Rainflow counting spectra, issued from [8].

Appendix C. Markov matrices – issued from [1]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [1]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.7991E+03	0.0000E+00	9.5547E+00	1.6391E+05	6.8646E+03	5.3774E+00	9.3451E+03	0.0000E+00	2.6887E+00
1.5800E+03	0.0000E+00	6.8305E+02	1.6391E+05	0.0000E+00	2.6887E+00	8.6489E+03	0.0000E+00	7.0000E+00
1.5069E+03	6.0827E+01	9.5547E+00	1.5602E+05	6.8646E+03	2.6887E+00	7.9526E+03	5.2382E+02	2.6887E+00
1.5069E+03	0.0000E+00	5.7296E+03	1.5602E+05	0.0000E+00	2.6887E+00	7.2564E+03	4.1906E+03	2.6887E+00
1.4339E+03	6.0827E+01	4.5892E+02	1.4813E+05	1.3729E+04	2.6887E+00	7.2564E+03	5.2382E+02	1.1301E+02
1.4339E+03	0.0000E+00	1.7753E+04	1.4813E+05	6.8646E+03	2.6887E+00	7.2564E+03	0.0000E+00	3.6290E+01
1.3609E+03	6.0827E+01	1.0437E+03	1.4813E+05	0.0000E+00	8.0661E+00	6.5602E+03	3.1429E+03	3.5000E+00
1.3609E+03	0.0000E+00	5.5948E+04	1.4024E+05	1.3729E+04	2.6887E+00	6.5602E+03	1.5715E+03	3.5000E+00
1.2878E+03	1.8248E+02	1.1200E+03	1.4024E+05	6.8646E+03	2.6887E+00	6.5602E+03	5.2382E+02	5.3727E+01
1.2878E+03	1.2165E+02	1.0417E+01	1.4024E+05	0.0000E+00	2.6887E+00	6.5602E+03	0.0000E+00	1.6746E+01
1.2878E+03	6.0827E+01	4.1061E+04	1.3234E+05	6.8646E+03	5.3774E+00	5.8640E+03	7.3335E+03	2.6887E+00
1.2878E+03	0.0000E+00	2.2121E+05	1.3234E+05	0.0000E+00	5.3774E+00	5.8640E+03	5.7620E+03	2.6887E+00
1.2148E+03	4.2579E+02	1.3443E+00	1.2445E+05	1.3729E+04	2.6887E+00	5.8640E+03	3.6667E+03	1.3457E+01
1.2148E+03	2.4331E+02	6.5528E+00	1.2445E+05	6.8646E+03	5.3774E+00	5.8640E+03	3.1429E+03	9.6887E+00
1.2148E+03	1.8248E+02	1.2776E+03	1.2445E+05	0.0000E+00	8.0661E+00	5.8640E+03	2.6191E+03	8.9167E-02
1.2148E+03	1.2165E+02	8.0328E+03	1.1656E+05	2.7458E+04	2.6887E+00	5.8640E+03	1.5715E+03	1.6146E+01
1.2148E+03	6.0827E+01	1.1241E+05	1.1656E+05	6.8646E+03	2.6887E+00	5.8640E+03	1.0476E+03	1.4414E+02
1.2148E+03	0.0000E+00	6.1819E+05	1.1656E+05	0.0000E+00	1.6132E+01	5.8640E+03	5.2382E+02	9.6053E+02
1.1418E+03	5.4744E+02	5.2085E+00	1.0867E+05	1.3729E+04	2.6887E+00	5.8640E+03	0.0000E+00	2.9346E+03
1.1418E+03	4.8661E+02	1.3429E+02	1.0867E+05	6.8646E+03	1.0755E+01	5.1677E+03	1.8334E+04	1.3443E+00
1.1418E+03	3.6496E+02	1.3443E+00	1.0867E+05	0.0000E+00	1.3444E+01	5.1677E+03	1.0476E+04	8.9167E-02
1.1418E+03	3.0413E+02	2.1806E+03	1.0077E+05	2.0594E+04	1.1566E+01	5.1677E+03	7.3335E+03	7.0000E+00
1.1418E+03	2.4331E+02	5.6658E+03	1.0077E+05	6.8646E+03	8.0661E+00	5.1677E+03	6.2859E+03	3.5000E+00
1.1418E+03	1.8248E+02	7.2577E+03	1.0077E+05	0.0000E+00	3.3887E+01	5.1677E+03	5.2382E+03	2.6887E+00
1.1418E+03	1.2165E+02	2.4576E+04	9.2880E+04	6.1781E+04	3.5000E+00	5.1677E+03	4.7144E+03	6.8788E+00
1.1418E+03	6.0827E+01	3.1005E+05	9.2880E+04	4.1188E+04	3.5000E+00	5.1677E+03	4.1906E+03	2.7779E+00
1.1418E+03	0.0000E+00	1.4589E+06	9.2880E+04	3.4323E+04	3.5000E+00	5.1677E+03	3.6667E+03	5.6350E+02
1.0687E+03	8.5157E+02	2.7333E+00	9.2880E+04	2.0594E+04	2.6887E+00	5.1677E+03	3.1429E+03	9.9571E+00
1.0687E+03	6.0827E+02	9.2416E+00	9.2880E+04	1.3729E+04	2.6887E+00	5.1677E+03	2.6191E+03	6.9679E+00
1.0687E+03	5.4744E+02	9.9571E+00	9.2880E+04	6.8646E+03	1.3443E+01	5.1677E+03	2.0953E+03	1.1382E+02
1.0687E+03	4.8661E+02	3.1756E+03	9.2880E+04	0.0000E+00	3.1927E+01	5.1677E+03	1.5715E+03	1.8206E+02
1.0687E+03	4.2579E+02	5.3774E+00	8.4987E+04	4.1188E+04	3.5000E+00	5.1677E+03	1.0476E+03	1.5402E+02
1.0687E+03	3.6496E+02	6.1887E+00	8.4987E+04	3.4323E+04	1.0500E+01	5.1677E+03	5.2382E+03	1.0476E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0687E+03	3.0413E+02	6.7217E+00	8.4987E+04	2.7458E+04	1.0417E+01	5.1677E+03	0.0000E+00	1.5772E+05
1.0687E+03	2.4331E+02	4.2708E+02	8.4987E+04	2.0594E+04	1.5877E+01	4.4715E+03	1.9905E+04	1.3443E+00
1.0687E+03	1.8248E+02	1.9713E+04	8.4987E+04	1.3729E+04	2.7779E+00	4.4715E+03	1.6762E+04	1.3443E+00
1.0687E+03	1.2165E+02	1.1176E+05	8.4987E+04	6.8646E+03	3.0565E+01	4.4715E+03	7.8573E+03	8.9167E-02
1.0687E+03	6.0827E+01	1.1494E+06	8.4987E+04	0.0000E+00	3.2010E+01	4.4715E+03	7.3335E+03	2.6887E+00
1.0687E+03	0.0000E+00	4.0597E+06	7.7095E+04	1.9907E+05	1.3443E+00	4.4715E+03	6.8097E+03	2.6887E+00
9.9571E+02	1.7031E+03	5.5986E+01	7.7095E+04	1.9221E+05	1.3443E+00	4.4715E+03	5.7620E+03	3.5000E+00
9.9571E+02	1.1557E+03	9.0771E+02	7.7095E+04	7.5511E+04	3.5000E+00	4.4715E+03	5.2382E+03	5.9783E+00
9.9571E+02	1.0341E+03	4.6174E+02	7.7095E+04	5.4917E+04	3.5000E+00	4.4715E+03	4.7144E+03	1.6025E+01
9.9571E+02	9.7323E+02	2.8537E+03	7.7095E+04	4.8052E+04	3.5000E+00	4.4715E+03	4.1906E+03	1.1175E+01
9.9571E+02	8.5157E+02	1.7500E+00	7.7095E+04	3.4323E+04	1.3189E+01	4.4715E+03	3.6667E+03	1.7639E+02
9.9571E+02	7.9075E+02	5.5126E+03	7.7095E+04	2.7458E+04	8.3392E+00	4.4715E+03	3.1429E+03	4.3835E+02
9.9571E+02	7.2992E+02	1.3414E+03	7.7095E+04	2.0594E+04	1.6606E+01	4.4715E+03	2.6191E+03	1.1329E+03
9.9571E+02	6.6909E+02	7.1765E+03	7.7095E+04	1.3729E+04	1.7844E+01	4.4715E+03	2.0953E+03	1.5811E+04
9.9571E+02	6.0827E+02	1.1454E+04	7.7095E+04	6.8646E+03	3.5900E+01	4.4715E+03	1.5715E+03	3.3879E+04
9.9571E+02	5.4744E+02	2.1755E+04	7.7095E+04	0.0000E+00	8.9450E+01	4.4715E+03	1.0476E+03	4.5447E+04
9.9571E+02	4.8661E+02	1.4320E+04	6.9202E+04	1.8534E+05	1.3443E+00	4.4715E+03	5.2382E+02	1.6981E+05
9.9571E+02	4.2579E+02	1.2476E+04	6.9202E+04	1.7848E+05	1.3443E+00	4.4715E+03	0.0000E+00	8.0157E+05
9.9571E+02	3.6496E+02	1.9877E+04	6.9202E+04	1.6475E+05	1.3443E+00	3.7753E+03	1.4143E+04	1.7500E+00
9.9571E+02	3.0413E+02	2.8734E+04	6.9202E+04	8.9240E+04	2.6887E+00	3.7753E+03	1.3096E+04	3.0943E+00
9.9571E+02	2.4331E+02	6.1601E+04	6.9202E+04	7.5511E+04	3.5000E+00	3.7753E+03	7.3335E+03	8.9167E-02
9.9571E+02	1.8248E+02	4.6059E+04	6.9202E+04	6.8646E+04	2.6887E+00	3.7753E+03	6.8097E+03	1.2333E+01
9.9571E+02	1.2165E+02	5.5274E+05	6.9202E+04	6.1781E+04	3.5000E+00	3.7753E+03	6.2859E+03	2.6887E+00
9.9571E+02	6.0827E+01	3.2674E+06	6.9202E+04	4.8052E+04	7.0000E+00	3.7753E+03	5.7620E+03	8.9666E+00
9.9571E+02	0.0000E+00	8.0539E+06	6.9202E+04	4.1188E+04	6.1887E+00	3.7753E+03	5.2382E+03	9.4400E+02
9.2268E+02	2.1289E+03	2.7993E+01	6.9202E+04	3.4323E+04	9.0557E+00	3.7753E+03	4.7144E+03	5.5529E+03
9.2268E+02	2.0681E+03	1.3068E+02	6.9202E+04	2.7458E+04	1.9294E+01	3.7753E+03	4.1906E+03	2.2928E+04
9.2268E+02	1.9465E+03	9.8780E+01	6.9202E+04	2.0594E+04	1.1566E+01	3.7753E+03	3.6667E+03	5.5254E+04
9.2268E+02	1.8856E+03	1.3068E+02	6.9202E+04	1.3729E+04	1.7755E+01	3.7753E+03	3.1429E+03	1.1502E+05
9.2268E+02	1.7031E+03	1.0012E+02	6.9202E+04	6.8646E+03	3.3728E+01	3.7753E+03	2.6191E+03	1.1856E+05
9.2268E+02	1.5815E+03	2.1987E+03	6.9202E+04	0.0000E+00	1.0815E+02	3.7753E+03	2.0953E+03	1.8366E+05
9.2268E+02	1.5207E+03	1.2763E+03	6.1309E+04	2.1280E+05	1.3443E+00	3.7753E+03	1.5715E+03	1.3604E+05
9.2268E+02	1.4598E+03	4.0911E+03	6.1309E+04	1.7161E+05	1.3443E+00	3.7753E+03	1.0476E+03	3.1155E+05
9.2268E+02	1.3990E+03	3.3236E+03	6.1309E+04	1.5789E+05	1.3443E+00	3.7753E+03	5.2382E+02	1.0654E+06
9.2268E+02	1.3382E+03	1.1370E+03	6.1309E+04	9.6104E+04	3.5000E+00	3.7753E+03	0.0000E+00	2.4082E+06
9.2268E+02	1.2774E+03	1.1133E+04	6.1309E+04	8.2375E+04	2.6887E+00	3.0791E+03	1.9905E+04	1.3443E+00
9.2268E+02	1.2165E+03	1.3141E+04	6.1309E+04	7.5511E+04	1.2500E+00	3.0791E+03	1.9381E+04	8.9167E-02
9.2268E+02	1.1557E+03	1.8159E+04	6.1309E+04	6.8646E+04	3.5000E+00	3.0791E+03	1.4667E+04	1.3443E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.2268E+02	1.0949E+03	4.1242E+04	6.1309E+04	6.1781E+04	1.0127E+01	3.0791E+03	1.3619E+04	1.7500E+00
9.2268E+02	1.0341E+03	5.3769E+04	6.1309E+04	5.4917E+04	3.5000E+00	3.0791E+03	1.3096E+04	1.7500E+00
9.2268E+02	9.7323E+02	5.0493E+04	6.1309E+04	4.8052E+04	2.7106E+01	3.0791E+03	1.0476E+04	1.7500E+00
9.2268E+02	9.1240E+02	6.1198E+04	6.1309E+04	4.1188E+04	1.0506E+01	3.0791E+03	9.9526E+03	1.3443E+00
9.2268E+02	8.5157E+02	1.1940E+05	6.1309E+04	3.4323E+04	7.0000E+00	3.0791E+03	8.3811E+03	3.5000E+00
9.2268E+02	7.9075E+02	1.6304E+05	6.1309E+04	2.7458E+04	1.5155E+01	3.0791E+03	7.8573E+03	1.4001E+03
9.2268E+02	7.2992E+02	2.3073E+05	6.1309E+04	2.0594E+04	2.0278E+01	3.0791E+03	7.3335E+03	1.4185E+02
9.2268E+02	6.6909E+02	3.2271E+05	6.1309E+04	1.3729E+04	3.1672E+01	3.0791E+03	6.8097E+03	1.0309E+04
9.2268E+02	6.0827E+02	3.8733E+05	6.1309E+04	6.8646E+03	3.3088E+01	3.0791E+03	6.2859E+03	1.3830E+04
9.2268E+02	5.4744E+02	4.5046E+05	6.1309E+04	0.0000E+00	7.0725E+01	3.0791E+03	5.7620E+03	2.7796E+04
9.2268E+02	4.8661E+02	6.2797E+05	5.3417E+04	1.9907E+05	1.3443E+00	3.0791E+03	5.2382E+03	4.2181E+04
9.2268E+02	4.2579E+02	5.9819E+05	5.3417E+04	1.7161E+05	1.7500E+00	3.0791E+03	4.7144E+03	1.2780E+05
9.2268E+02	3.6496E+02	5.0481E+05	5.3417E+04	1.5789E+05	1.3443E+00	3.0791E+03	4.1906E+03	3.3609E+05
9.2268E+02	3.0413E+02	6.1146E+05	5.3417E+04	1.4416E+05	1.3443E+00	3.0791E+03	3.6667E+03	4.2329E+05
9.2268E+02	2.4331E+02	5.5514E+05	5.3417E+04	1.3729E+05	1.7500E+00	3.0791E+03	3.1429E+03	5.6913E+05
9.2268E+02	1.8248E+02	5.6963E+05	5.3417E+04	1.0983E+05	3.5000E+00	3.0791E+03	2.6191E+03	7.0135E+05
9.2268E+02	1.2165E+02	1.6892E+06	5.3417E+04	9.6104E+04	5.3774E+00	3.0791E+03	2.0953E+03	7.3868E+05
9.2268E+02	6.0827E+01	7.6525E+06	5.3417E+04	8.9240E+04	3.5000E+00	3.0791E+03	1.5715E+03	6.7331E+05
9.2268E+02	0.0000E+00	1.3547E+07	5.3417E+04	7.5511E+04	3.5000E+00	3.0791E+03	1.0476E+03	1.0685E+06
8.4965E+02	2.2506E+03	1.3068E+02	5.3417E+04	6.8646E+04	3.5000E+00	3.0791E+03	5.2382E+02	2.5736E+06
8.4965E+02	2.1898E+03	1.2188E+03	5.3417E+04	6.1781E+04	3.5000E+00	3.0791E+03	0.0000E+00	5.7196E+06
8.4965E+02	2.1289E+03	6.1615E+02	5.3417E+04	5.4917E+04	1.5877E+01	2.3829E+03	1.3096E+04	1.7500E+00
8.4965E+02	2.0681E+03	7.9121E+02	5.3417E+04	4.8052E+04	7.0000E+00	2.3829E+03	1.2572E+04	1.3443E+00
8.4965E+02	2.0073E+03	1.8683E+02	5.3417E+04	4.1188E+04	1.7500E+01	2.3829E+03	1.2048E+04	1.7500E+00
8.4965E+02	1.9465E+03	1.4605E+03	5.3417E+04	3.4323E+04	2.2967E+01	2.3829E+03	1.1000E+04	1.5740E+01
8.4965E+02	1.8856E+03	4.7755E+03	5.3417E+04	2.7458E+04	2.0367E+01	2.3829E+03	1.0476E+04	9.3052E+00
8.4965E+02	1.8248E+03	7.0892E+03	5.3417E+04	2.0594E+04	4.6584E+01	2.3829E+03	9.9526E+03	1.7500E+00
8.4965E+02	1.7640E+03	1.4514E+03	5.3417E+04	1.3729E+04	5.1370E+01	2.3829E+03	9.4288E+03	1.2902E+03
8.4965E+02	1.7031E+03	1.2157E+04	5.3417E+04	6.8646E+03	4.9954E+01	2.3829E+03	8.9050E+03	1.0417E+01
8.4965E+02	1.6423E+03	8.3412E+03	5.3417E+04	0.0000E+00	1.0770E+02	2.3829E+03	8.3811E+03	1.0277E+03
8.4965E+02	1.5815E+03	1.9605E+04	4.5524E+04	1.9221E+05	1.3443E+00	2.3829E+03	7.8573E+03	4.2487E+03
8.4965E+02	1.5207E+03	1.8628E+04	4.5524E+04	1.6475E+05	4.4387E+00	2.3829E+03	7.3335E+03	2.9960E+04
8.4965E+02	1.4598E+03	2.9187E+04	4.5524E+04	1.5789E+05	7.5330E+00	2.3829E+03	6.8097E+03	5.7832E+04
8.4965E+02	1.3990E+03	4.4230E+04	4.5524E+04	1.5102E+05	2.6887E+00	2.3829E+03	6.2859E+03	1.0217E+05
8.4965E+02	1.3382E+03	7.5678E+04	4.5524E+04	1.4416E+05	9.2830E+00	2.3829E+03	5.7620E+03	2.9357E+05
8.4965E+02	1.2774E+03	1.0519E+05	4.5524E+04	1.3729E+05	3.0943E+00	2.3829E+03	5.2382E+03	3.7896E+05
8.4965E+02	1.2165E+03	1.6079E+05	4.5524E+04	1.3043E+05	4.8443E+00	2.3829E+03	4.7144E+03	6.8654E+05
8.4965E+02	1.1557E+03	2.1029E+05	4.5524E+04	1.2356E+05	5.2500E+00	2.3829E+03	4.1906E+03	7.0851E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.4965E+02	1.0949E+03	2.1390E+05	4.5524E+04	1.1670E+05	3.0943E+00	2.3829E+03	3.6667E+03	1.1583E+06
8.4965E+02	1.0341E+03	3.8295E+05	4.5524E+04	1.0297E+05	9.6887E+00	2.3829E+03	3.1429E+03	1.2992E+06
8.4965E+02	9.7323E+02	5.9644E+05	4.5524E+04	8.9240E+04	3.5000E+00	2.3829E+03	2.6191E+03	1.3661E+06
8.4965E+02	9.1240E+02	9.4062E+05	4.5524E+04	7.5511E+04	6.1887E+00	2.3829E+03	2.0953E+03	1.5948E+06
8.4965E+02	8.5157E+02	1.0291E+06	4.5524E+04	6.8646E+04	1.5066E+01	2.3829E+03	1.5715E+03	1.5700E+06
8.4965E+02	7.9075E+02	1.3332E+06	4.5524E+04	6.1781E+04	6.1887E+00	2.3829E+03	1.0476E+03	2.3440E+06
8.4965E+02	7.2992E+02	1.6851E+06	4.5524E+04	5.4917E+04	2.6377E+01	2.3829E+03	5.2382E+02	5.5534E+06
8.4965E+02	6.6909E+02	2.2009E+06	4.5524E+04	4.8052E+04	7.0000E+00	2.3829E+03	0.0000E+00	1.1828E+07
8.4965E+02	6.0827E+02	2.4412E+06	4.5524E+04	4.1188E+04	1.5967E+01	1.6866E+03	1.8334E+04	8.9167E-02
8.4965E+02	5.4744E+02	3.0763E+06	4.5524E+04	3.4323E+04	3.1217E+01	1.6866E+03	1.6762E+04	6.2500E-01
8.4965E+02	4.8661E+02	3.3008E+06	4.5524E+04	2.7458E+04	4.2611E+01	1.6866E+03	1.6238E+04	1.9693E+00
8.4965E+02	4.2579E+02	3.7668E+06	4.5524E+04	2.0594E+04	3.2900E+01	1.6866E+03	1.5715E+04	5.2259E+01
8.4965E+02	3.6496E+02	3.6948E+06	4.5524E+04	1.3729E+04	3.6334E+01	1.6866E+03	1.4143E+04	1.7500E+00
8.4965E+02	3.0413E+02	3.4231E+06	4.5524E+04	6.8646E+03	7.0583E+01	1.6866E+03	1.3096E+04	1.7500E+00
8.4965E+02	2.4331E+02	2.7768E+06	4.5524E+04	0.0000E+00	2.0915E+04	1.6866E+03	1.2572E+04	3.0943E+00
8.4965E+02	1.8248E+02	2.8043E+06	3.7631E+04	1.8534E+05	3.0943E+00	1.6866E+03	1.2048E+04	4.9335E+00
8.4965E+02	1.2165E+02	4.6051E+06	3.7631E+04	1.7161E+05	3.0943E+00	1.6866E+03	1.1524E+04	1.4093E+01
8.4965E+02	6.0827E+01	1.3583E+07	3.7631E+04	1.6475E+05	1.7500E+00	1.6866E+03	1.1000E+04	8.3997E+02
8.4965E+02	0.0000E+00	2.0700E+07	3.7631E+04	1.5789E+05	3.5000E+00	1.6866E+03	1.0476E+04	2.7440E+03
7.7661E+02	2.6764E+03	1.3546E+02	3.7631E+04	1.5102E+05	8.3443E+00	1.6866E+03	9.9526E+03	2.7456E+03
7.7661E+02	2.5547E+03	2.6136E+02	3.7631E+04	1.4416E+05	7.9387E+00	1.6866E+03	9.4288E+03	7.4114E+03
7.7661E+02	2.4331E+03	6.1279E+02	3.7631E+04	1.3729E+05	6.1887E+00	1.6866E+03	8.9050E+03	1.4677E+04
7.7661E+02	2.3114E+03	2.7993E+01	3.7631E+04	1.3043E+05	4.8443E+00	1.6866E+03	8.3811E+03	2.3362E+04
7.7661E+02	2.2506E+03	1.3866E+03	3.7631E+04	1.2356E+05	4.8443E+00	1.6866E+03	7.8573E+03	6.7434E+04
7.7661E+02	2.1898E+03	1.6246E+03	3.7631E+04	1.1670E+05	3.0943E+00	1.6866E+03	7.3335E+03	1.3409E+05
7.7661E+02	2.1289E+03	3.5720E+03	3.7631E+04	1.0983E+05	3.0943E+00	1.6866E+03	6.8097E+03	2.1962E+05
7.7661E+02	2.0681E+03	4.0230E+03	3.7631E+04	1.0297E+05	6.5943E+00	1.6866E+03	6.2859E+03	3.4874E+05
7.7661E+02	2.0073E+03	6.1539E+03	3.7631E+04	9.6104E+04	3.5000E+00	1.6866E+03	5.7620E+03	5.5030E+05
7.7661E+02	1.9465E+03	5.4915E+03	3.7631E+04	8.9240E+04	9.6887E+00	1.6866E+03	5.2382E+03	8.8322E+05
7.7661E+02	1.8856E+03	1.0857E+04	3.7631E+04	8.2375E+04	7.0000E+00	1.6866E+03	4.7144E+03	1.1641E+06
7.7661E+02	1.8248E+03	2.1872E+04	3.7631E+04	7.5511E+04	8.2500E+00	1.6866E+03	4.1906E+03	1.5845E+06
7.7661E+02	1.7640E+03	2.5802E+04	3.7631E+04	6.8646E+04	1.3189E+01	1.6866E+03	3.6667E+03	1.9314E+06
7.7661E+02	1.7031E+03	3.5783E+04	3.7631E+04	6.1781E+04	2.9967E+01	1.6866E+03	3.1429E+03	2.5713E+06
7.7661E+02	1.6423E+03	6.2972E+04	3.7631E+04	5.4917E+04	1.3189E+01	1.6866E+03	2.6191E+03	2.7912E+06
7.7661E+02	1.5815E+03	7.0979E+04	3.7631E+04	4.8052E+04	3.0784E+01	1.6866E+03	2.0953E+03	3.2668E+06
7.7661E+02	1.5207E+03	8.8106E+04	3.7631E+04	4.1188E+04	3.4367E+01	1.6866E+03	1.5715E+03	3.1382E+06
7.7661E+02	1.4598E+03	1.3834E+05	3.7631E+04	3.4323E+04	5.9382E+01	1.6866E+03	1.0476E+03	1.2866E+06
7.7661E+02	1.3990E+03	2.0804E+05	3.7631E+04	2.7458E+04	5.9378E+01	1.6866E+03	5.2382E+02	9.1285E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.7661E+02	1.3382E+03	2.6995E+05	3.7631E+04	2.0594E+04	3.4951E+01	1.6866E+03	0.0000E+00	2.0731E+07
7.7661E+02	1.2774E+03	3.6972E+05	3.7631E+04	1.3729E+04	1.7572E+02	9.9041E+02	1.7810E+04	2.1853E+01
7.7661E+02	1.2165E+03	5.1033E+05	3.7631E+04	6.8646E+03	3.1305E+04	9.9041E+02	1.7286E+04	1.3429E+02
7.7661E+02	1.1557E+03	6.8439E+05	3.7631E+04	0.0000E+00	6.2428E+04	9.9041E+02	1.6762E+04	1.2299E+01
7.7661E+02	1.0949E+03	9.2251E+05	2.9738E+04	1.9907E+05	4.4583E-02	9.9041E+02	1.6238E+04	1.3496E+02
7.7661E+02	1.0341E+03	1.2577E+06	2.9738E+04	1.7161E+05	1.3889E+00	9.9041E+02	1.5715E+04	2.0430E+00
7.7661E+02	9.7323E+02	1.6952E+06	2.9738E+04	1.6475E+05	3.5000E+00	9.9041E+02	1.5191E+04	1.8139E+01
7.7661E+02	9.1240E+02	1.9492E+06	2.9738E+04	1.5789E+05	4.1250E+00	9.9041E+02	1.4667E+04	3.6074E+01
7.7661E+02	8.5157E+02	2.3789E+06	2.9738E+04	1.5102E+05	1.3443E+00	9.9041E+02	1.4143E+04	7.8983E+00
7.7661E+02	7.9075E+02	3.3303E+06	2.9738E+04	1.4416E+05	3.0943E+00	9.9041E+02	1.3619E+04	2.3126E+03
7.7661E+02	7.2992E+02	3.7849E+06	2.9738E+04	1.3729E+05	4.1250E+00	9.9041E+02	1.3096E+04	3.9968E+02
7.7661E+02	6.6909E+02	4.5950E+06	2.9738E+04	1.3043E+05	7.6250E+00	9.9041E+02	1.2572E+04	8.3548E+02
7.7661E+02	6.0827E+02	5.1857E+06	2.9738E+04	1.2356E+05	3.0943E+00	9.9041E+02	1.2048E+04	4.1387E+02
7.7661E+02	5.4744E+02	5.6249E+06	2.9738E+04	1.1670E+05	5.2500E+00	9.9041E+02	1.1524E+04	2.1888E+03
7.7661E+02	4.8661E+02	6.0133E+06	2.9738E+04	1.0983E+05	5.2500E+00	9.9041E+02	1.1000E+04	3.7842E+03
7.7661E+02	4.2579E+02	6.2176E+06	2.9738E+04	1.0297E+05	1.5750E+01	9.9041E+02	1.0476E+04	6.0897E+03
7.7661E+02	3.6496E+02	5.8253E+06	2.9738E+04	9.6104E+04	1.5750E+01	9.9041E+02	9.9526E+03	3.0558E+04
7.7661E+02	3.0413E+02	5.2716E+06	2.9738E+04	8.9240E+04	1.5750E+01	9.9041E+02	9.4288E+03	4.0796E+04
7.7661E+02	2.4331E+02	4.4405E+06	2.9738E+04	8.2375E+04	2.1000E+01	9.9041E+02	8.9050E+03	6.4235E+04
7.7661E+02	1.8248E+02	3.9160E+06	2.9738E+04	7.5511E+04	3.6424E+01	9.9041E+02	8.3811E+03	6.7355E+04
7.7661E+02	1.2165E+02	6.0374E+06	2.9738E+04	6.8646E+04	1.3189E+01	9.9041E+02	7.8573E+03	1.3551E+05
7.7661E+02	6.0827E+01	1.7699E+07	2.9738E+04	6.1781E+04	8.3729E+01	9.9041E+02	7.3335E+03	2.4780E+05
7.7661E+02	0.0000E+00	2.6545E+07	2.9738E+04	5.4917E+04	6.3062E+01	9.9041E+02	6.8097E+03	3.9229E+05
7.0358E+02	2.7980E+03	1.4298E+02	2.9738E+04	4.8052E+04	4.2627E+01	9.9041E+02	6.2859E+03	6.0061E+05
7.0358E+02	2.6764E+03	2.7993E+01	2.9738E+04	4.1188E+04	6.3433E+01	9.9041E+02	5.7620E+03	9.8643E+05
7.0358E+02	2.6155E+03	1.3068E+02	2.9738E+04	3.4323E+04	7.8025E+01	9.9041E+02	5.2382E+03	1.2169E+06
7.0358E+02	2.4939E+03	1.1323E+03	2.9738E+04	2.7458E+04	2.4819E+02	9.9041E+02	4.7144E+03	1.7042E+06
7.0358E+02	2.4331E+03	5.6150E+01	2.9738E+04	2.0594E+04	3.6199E+03	9.9041E+02	4.1906E+03	2.3722E+06
7.0358E+02	2.3722E+03	2.8753E+03	2.9738E+04	1.3729E+04	3.8449E+03	9.9041E+02	3.6667E+03	2.8827E+06
7.0358E+02	2.3114E+03	1.3192E+03	2.9738E+04	6.8646E+03	4.5666E+04	9.9041E+02	3.1429E+03	3.6320E+06
7.0358E+02	2.2506E+03	5.0166E+02	2.9738E+04	0.0000E+00	1.8796E+05	9.9041E+02	2.6191E+03	4.7881E+06
7.0358E+02	2.1898E+03	3.9367E+03	2.1846E+04	1.8534E+05	6.2500E-01	9.9041E+02	2.0953E+03	5.4725E+06
7.0358E+02	2.1289E+03	4.4784E+03	2.1846E+04	1.7161E+05	1.3443E+00	9.9041E+02	1.5715E+03	5.9219E+06
7.0358E+02	2.0681E+03	3.2995E+03	2.1846E+04	1.5789E+05	1.3443E+00	9.9041E+02	1.0476E+03	7.0759E+06
7.0358E+02	2.0073E+03	4.1336E+03	2.1846E+04	1.3729E+05	1.3889E+00	9.9041E+02	5.2382E+02	1.5530E+07
7.0358E+02	1.9465E+03	2.2415E+04	2.1846E+04	1.3043E+05	2.5943E+00	9.9041E+02	0.0000E+00	3.4407E+07
7.0358E+02	1.8856E+03	1.6899E+04	2.1846E+04	1.2356E+05	1.3443E+00	2.9419E+02	1.8334E+03	5.2178E+01
7.0358E+02	1.8248E+03	1.8183E+04	2.1846E+04	1.1670E+05	7.0000E+00	2.9419E+02	1.7810E+04	4.0311E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.0358E+02	1.7640E+03	4.4289E+04	2.1846E+04	1.0983E+05	5.2500E+00	2.9419E+02	1.7286E+04	4.4583E-02
7.0358E+02	1.7031E+03	5.3210E+04	2.1846E+04	1.0297E+05	2.0812E+01	2.9419E+02	1.6762E+04	8.9167E-02
7.0358E+02	1.6423E+03	7.5996E+04	2.1846E+04	9.6104E+04	1.5248E+01	2.9419E+02	1.6238E+04	2.9790E+01
7.0358E+02	1.5815E+03	1.0418E+05	2.1846E+04	8.9240E+04	7.5330E+00	2.9419E+02	1.5715E+04	1.1304E+02
7.0358E+02	1.5207E+03	1.4061E+05	2.1846E+04	8.2375E+04	6.4105E+01	2.9419E+02	1.5191E+04	3.5911E+02
7.0358E+02	1.4598E+03	1.9564E+05	2.1846E+04	7.5511E+04	2.5028E+01	2.9419E+02	1.4667E+04	1.0571E+03
7.0358E+02	1.3990E+03	2.1240E+05	2.1846E+04	6.8646E+04	5.1745E+01	2.9419E+02	1.4143E+04	4.2929E+03
7.0358E+02	1.3382E+03	3.2513E+05	2.1846E+04	6.1781E+04	8.9302E+01	2.9419E+02	1.3619E+04	5.2483E+03
7.0358E+02	1.2774E+03	3.7148E+05	2.1846E+04	5.4917E+04	1.1504E+02	2.9419E+02	1.3096E+04	1.7101E+04
7.0358E+02	1.2165E+03	6.0739E+05	2.1846E+04	4.8052E+04	2.4261E+02	2.9419E+02	1.2572E+04	1.7861E+04
7.0358E+02	1.1557E+03	7.1662E+05	2.1846E+04	4.1188E+04	1.9050E+03	2.9419E+02	1.2048E+04	5.4867E+04
7.0358E+02	1.0949E+03	1.0619E+06	2.1846E+04	3.4323E+04	2.6118E+02	2.9419E+02	1.1524E+04	5.9183E+04
7.0358E+02	1.0341E+03	1.1431E+06	2.1846E+04	2.7458E+04	7.4020E+03	2.9419E+02	1.1000E+04	5.8393E+04
7.0358E+02	9.7323E+02	1.6169E+06	2.1846E+04	2.0594E+04	7.1555E+02	2.9419E+02	1.0476E+04	8.1273E+04
7.0358E+02	9.1240E+02	1.8568E+06	2.1846E+04	1.3729E+04	1.1170E+04	2.9419E+02	9.9526E+03	9.7834E+04
7.0358E+02	8.5157E+02	2.4654E+06	2.1846E+04	6.8646E+03	6.3738E+04	2.9419E+02	9.4288E+03	1.0502E+05
7.0358E+02	7.9075E+02	2.8655E+06	2.1846E+04	0.0000E+00	3.7904E+05	2.9419E+02	8.9050E+03	1.5998E+05
7.0358E+02	7.2992E+02	3.5068E+06	1.3953E+04	2.1967E+05	4.4583E-02	2.9419E+02	8.3811E+03	1.7425E+05
7.0358E+02	6.6909E+02	4.1844E+06	1.3953E+04	2.0594E+05	4.4583E-02	2.9419E+02	7.8573E+03	2.9662E+05
7.0358E+02	6.0827E+02	4.5930E+06	1.3953E+04	1.9221E+05	4.4583E-02	2.9419E+02	7.3335E+03	3.6046E+05
7.0358E+02	5.4744E+02	5.2374E+06	1.3953E+04	1.8534E+05	1.3889E+00	2.9419E+02	6.8097E+03	5.7735E+05
7.0358E+02	4.8661E+02	5.6688E+06	1.3953E+04	1.7848E+05	4.4583E-02	2.9419E+02	6.2859E+03	8.1832E+05
7.0358E+02	4.2579E+02	5.8712E+06	1.3953E+04	1.7161E+05	6.2500E-01	2.9419E+02	5.7620E+03	1.3041E+06
7.0358E+02	3.6496E+02	5.8733E+06	1.3953E+04	1.5102E+05	6.0916E+00	2.9419E+02	5.2382E+03	1.6270E+06
7.0358E+02	3.0413E+02	5.1681E+06	1.3953E+04	1.4416E+05	7.5875E-01	2.9419E+02	4.7144E+03	2.4333E+06
7.0358E+02	2.4331E+02	4.5070E+06	1.3953E+04	1.3729E+05	2.4196E+00	2.9419E+02	4.1906E+03	2.7753E+06
7.0358E+02	1.8248E+02	4.0379E+06	1.3953E+04	1.3043E+05	2.3750E+00	2.9419E+02	3.6667E+03	3.5764E+06
7.0358E+02	1.2165E+02	6.5113E+06	1.3953E+04	1.2356E+05	3.6783E+00	2.9419E+02	3.1429E+03	4.7271E+06
7.0358E+02	6.0827E+01	1.9170E+07	1.3953E+04	1.1670E+05	7.1417E-01	2.9419E+02	2.6191E+03	6.2935E+06
7.0358E+02	0.0000E+00	2.7769E+07	1.3953E+04	1.0983E+05	6.7664E+00	2.9419E+02	2.0953E+03	7.8954E+06
6.3055E+02	2.9197E+03	1.7076E+01	1.3953E+04	1.0297E+05	9.0139E+00	2.9419E+02	1.5715E+03	9.0860E+06
6.3055E+02	2.7980E+03	2.7993E+01	1.3953E+04	9.6104E+04	1.3478E+01	2.9419E+02	1.0476E+03	1.0650E+07
6.3055E+02	2.7372E+03	5.2170E+01	1.3953E+04	8.9240E+04	1.8177E+01	2.9419E+02	5.2382E+02	2.2181E+07
6.3055E+02	2.6764E+03	1.3130E+02	1.3953E+04	8.2375E+04	5.2113E+01	2.9419E+02	0.0000E+00	5.0365E+07
6.3055E+02	2.6155E+03	4.4583E-02	1.3953E+04	7.5511E+04	1.5569E+04	- 4.0203E+02	1.7810E+04	6.4491E+00
6.3055E+02	2.4939E+03	5.9865E+02	1.3953E+04	6.8646E+04	9.1489E+01	- 4.0203E+02	1.7286E+04	9.8582E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.3055E+02	2.4331E+03	3.6268E+02	1.3953E+04	6.1781E+04	1.6199E+02	-	1.6762E+04	1.9248E+01
6.3055E+02	2.3722E+03	1.4949E+03	1.3953E+04	5.4917E+04	2.5638E+02	-	1.6238E+04	9.0017E+00
6.3055E+02	2.3114E+03	6.2274E+03	1.3953E+04	4.8052E+04	3.7703E+03	-	1.5715E+04	3.5630E+01
6.3055E+02	2.2506E+03	3.2551E+03	1.3953E+04	4.1188E+04	5.5833E+03	-	1.5191E+04	1.9770E+03
6.3055E+02	2.1898E+03	4.0966E+03	1.3953E+04	3.4323E+04	2.5843E+03	-	1.4667E+04	2.9789E+03
6.3055E+02	2.1289E+03	6.4608E+03	1.3953E+04	2.7458E+04	4.3712E+03	-	1.4143E+04	5.6209E+03
6.3055E+02	2.0681E+03	8.0616E+03	1.3953E+04	2.0594E+04	4.7069E+03	-	1.3619E+04	2.0537E+04
6.3055E+02	2.0073E+03	9.8532E+03	1.3953E+04	1.3729E+04	1.8881E+04	-	1.3096E+04	4.4653E+04
6.3055E+02	1.9465E+03	8.7367E+03	1.3953E+04	6.8646E+03	3.4961E+05	-	1.2572E+04	8.1023E+04
6.3055E+02	1.8856E+03	2.2001E+04	1.3953E+04	0.0000E+00	1.8651E+06	-	1.2048E+04	1.1489E+05
6.3055E+02	1.8248E+03	3.2274E+04	6.0604E+03	3.3637E+05	1.3443E+00	-	1.1524E+04	1.5500E+05
6.3055E+02	1.7640E+03	2.9355E+04	6.0604E+03	3.1577E+05	1.3443E+00	-	1.1000E+04	1.9202E+05
6.3055E+02	1.7031E+03	5.3874E+04	6.0604E+03	2.8145E+05	1.3443E+00	-	1.0476E+04	1.4556E+05
6.3055E+02	1.6423E+03	8.3652E+04	6.0604E+03	1.9221E+05	4.4583E-02	-	9.9526E+03	1.5630E+05
6.3055E+02	1.5815E+03	7.2394E+04	6.0604E+03	1.7848E+05	4.4583E-02	-	9.4288E+03	1.6816E+05
6.3055E+02	1.5207E+03	1.0768E+05	6.0604E+03	1.5789E+05	8.9167E-02	-	8.9050E+03	1.6516E+05
6.3055E+02	1.4598E+03	1.7660E+05	6.0604E+03	1.5102E+05	1.3443E+00	-	8.3811E+03	2.4940E+05
6.3055E+02	1.3990E+03	2.0952E+05	6.0604E+03	1.4416E+05	3.1389E+00	-	7.8573E+03	3.2619E+05
6.3055E+02	1.3382E+03	2.6085E+05	6.0604E+03	1.3729E+05	8.0333E-01	-	7.3335E+03	4.4269E+05
6.3055E+02	1.2774E+03	4.1009E+05	6.0604E+03	1.3043E+05	1.4335E+00	-	6.8097E+03	7.1547E+05
6.3055E+02	1.2165E+03	4.7505E+05	6.0604E+03	1.2356E+05	7.5875E-01	-	6.2859E+03	8.9472E+05
6.3055E+02	1.1557E+03	6.1423E+05	6.0604E+03	1.1670E+05	1.1473E+01	-	5.7620E+03	1.4147E+06
6.3055E+02	1.0949E+03	7.5759E+05	6.0604E+03	1.0983E+05	2.0688E+04	-	5.2382E+03	1.7945E+06
6.3055E+02	1.0341E+03	1.0275E+06	6.0604E+03	1.0297E+05	1.0354E+04	-	4.7144E+03	2.4360E+06
6.3055E+02	9.7323E+02	1.2614E+06	6.0604E+03	9.6104E+04	2.0732E+04	-	4.1906E+03	3.1189E+06
6.3055E+02	9.1240E+02	1.5738E+06	6.0604E+03	8.9240E+04	5.1743E+04	-	3.6667E+03	4.2902E+06
6.3055E+02	8.5157E+02	2.1168E+06	6.0604E+03	8.2375E+04	7.4166E+04	-	3.1429E+05	5.3811E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.3055E+02	7.9075E+02	2.3770E+06	6.0604E+03	7.5511E+04	6.7280E+04	-	2.6191E+03	6.9011E+06
6.3055E+02	7.2992E+02	2.9257E+06	6.0604E+03	6.8646E+04	1.0358E+05	-	2.0953E+03	8.5421E+06
6.3055E+02	6.6909E+02	3.5981E+06	6.0604E+03	6.1781E+04	5.7258E+04	-	1.5715E+03	8.9875E+06
6.3055E+02	6.0827E+02	3.9787E+06	6.0604E+03	5.4917E+04	1.2966E+05	-	1.0476E+03	1.1036E+07
6.3055E+02	5.4744E+02	4.5270E+06	6.0604E+03	4.8052E+04	1.3172E+05	-	5.2382E+02	2.2309E+07
6.3055E+02	4.8661E+02	4.6854E+06	6.0604E+03	4.1188E+04	2.4006E+05	-	0.0000E+00	4.7107E+07
6.3055E+02	4.2579E+02	5.4062E+06	6.0604E+03	3.4323E+04	2.5988E+05	-	1.9905E+04	8.9167E-02
6.3055E+02	3.6496E+02	4.7750E+06	6.0604E+03	2.7458E+04	6.1299E+05	-	1.9381E+04	1.0417E+00
6.3055E+02	3.0413E+02	4.9015E+06	6.0604E+03	2.0594E+04	1.0668E+06	-	1.7810E+04	8.4853E-01
6.3055E+02	2.4331E+02	4.1249E+06	6.0604E+03	1.3729E+04	2.2881E+06	-	1.7286E+04	1.3889E+00
6.3055E+02	1.8248E+02	3.8120E+06	6.0604E+03	6.8646E+03	3.3975E+06	-	1.6762E+04	1.1692E+01
6.3055E+02	1.2165E+02	6.0857E+06	6.0604E+03	0.0000E+00	1.1415E+07	-	1.6238E+04	3.9186E+01
6.3055E+02	6.0827E+01	1.8035E+07	-	3.4323E+05	2.6887E+00	-	1.5715E+04	1.2007E+02
6.3055E+02	0.0000E+00	2.8554E+07	-	2.8831E+05	1.3443E+00	-	1.5191E+04	9.5590E+01
5.5751E+02	3.0413E+03	6.2500E-01	-	2.7458E+05	4.4583E-02	-	1.4667E+04	1.4913E+03
5.5751E+02	2.9805E+03	6.2500E-01	-	2.3340E+05	4.4583E-02	-	1.4143E+04	1.9896E+03
5.5751E+02	2.7372E+03	1.7507E+01	-	2.2653E+05	4.4583E-02	-	1.3619E+04	1.0126E+04
5.5751E+02	2.6764E+03	2.7993E+01	-	2.0594E+05	4.4583E-02	-	1.3096E+04	2.4619E+04
5.5751E+02	2.6155E+03	1.4317E+02	-	1.9221E+05	4.4583E-02	-	1.2572E+04	3.0141E+04
5.5751E+02	2.5547E+03	1.1075E+02	-	1.8534E+05	4.4583E-02	-	1.2048E+04	3.2724E+04
5.5751E+02	2.4939E+03	1.9253E+03	-	1.7848E+05	8.9167E-02	-	1.1524E+04	5.9265E+04
5.5751E+02	2.4331E+03	7.2707E+02	-	1.7161E+05	4.4583E-02	-	1.1000E+04	6.8633E+04
5.5751E+02	2.3722E+03	1.4927E+03	-	1.6475E+05	1.4335E+00	-	1.0476E+04	8.2247E+04
5.5751E+02	2.3114E+03	1.6209E+02	-	1.5789E+05	4.4583E-02	-	9.9526E+03	1.1902E+05
5.5751E+02	2.2506E+03	1.6996E+03	-	1.5102E+05	1.9996E-01	-	9.4288E+03	1.1914E+05
5.5751E+02	2.1898E+03	3.6605E+03	-	1.3729E+05	1.3375E-01	-	8.9050E+03	1.3614E+05
5.5751E+02	2.1289E+03	2.7944E+03	-	1.3043E+05	4.3443E+00	-	8.3811E+05	2.0190E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.5751E+02	2.0681E+03	3.3269E+03	-	1.2356E+05	2.6750E-01	-	7.8573E+03	2.2887E+05
5.5751E+02	2.0073E+03	9.2175E+03	-	1.1670E+05	5.1730E+03	-	7.3335E+03	3.8188E+05
5.5751E+02	1.9465E+03	9.9138E+03	-	1.0983E+05	5.1746E+03	-	6.8097E+03	5.5296E+05
5.5751E+02	1.8856E+03	6.3592E+03	-	1.0297E+05	5.1824E+03	-	6.2859E+03	7.8202E+05
5.5751E+02	1.8248E+03	1.3334E+04	-	9.6104E+04	1.0432E+04	-	5.7620E+03	1.1798E+06
5.5751E+02	1.7640E+03	2.2924E+04	-	8.9240E+04	1.2061E+04	-	5.2382E+03	1.5876E+06
5.5751E+02	1.7031E+03	4.2247E+04	-	8.2375E+04	2.2463E+04	-	4.7144E+03	2.0550E+06
5.5751E+02	1.6423E+03	4.4495E+04	-	7.5511E+04	2.6004E+04	-	4.1906E+03	2.7765E+06
5.5751E+02	1.5815E+03	8.7741E+04	-	6.8646E+04	4.6747E+04	-	3.6667E+03	3.2341E+06
5.5751E+02	1.5207E+03	9.6021E+04	-	6.1781E+04	4.6829E+04	-	3.1429E+03	4.0017E+06
5.5751E+02	1.4598E+03	8.7350E+04	-	5.4917E+04	5.0006E+04	-	2.6191E+03	4.8202E+06
5.5751E+02	1.3990E+03	1.5362E+05	-	4.8052E+04	7.5873E+04	-	2.0953E+03	5.3526E+06
5.5751E+02	1.3382E+03	2.2448E+05	-	4.1188E+04	1.0387E+05	-	1.5715E+03	5.5026E+06
5.5751E+02	1.2774E+03	2.5271E+05	-	3.4323E+04	1.4729E+05	-	1.0476E+03	6.8624E+06
5.5751E+02	1.2165E+03	3.2510E+05	-	2.7458E+04	4.6289E+05	-	5.2382E+02	1.5546E+07
5.5751E+02	1.1557E+03	4.0627E+05	-	2.0594E+04	7.8167E+05	-	0.0000E+00	3.4976E+07
5.5751E+02	1.0949E+03	5.6433E+05	-	1.3729E+04	1.3532E+06	-	2.2524E+04	4.4583E-02
5.5751E+02	1.0341E+03	6.2099E+05	-	6.8646E+03	2.7601E+06	-	2.1477E+04	4.4583E-02
5.5751E+02	9.7323E+02	7.6304E+05	-	0.0000E+00	9.5939E+06	-	1.8858E+04	4.4583E-02
5.5751E+02	9.1240E+02	1.0221E+06	-	3.2264E+05	1.3443E+00	-	1.7810E+04	7.3620E-02
5.5751E+02	8.5157E+02	1.1897E+06	-	3.1577E+05	1.3443E+00	-	1.7286E+04	4.4583E-02
5.5751E+02	7.9075E+02	1.5569E+06	-	2.9518E+05	1.7500E+00	-	1.6762E+04	1.8999E+00
5.5751E+02	7.2992E+02	1.7975E+06	-	2.8145E+05	3.0943E+00	-	1.6238E+04	1.2232E+02
5.5751E+02	6.6909E+02	2.1509E+06	-	2.7458E+05	1.7500E+00	-	1.5715E+04	1.4367E+01
5.5751E+02	6.0827E+02	2.4203E+06	-	2.6085E+05	6.2500E-01	-	1.5191E+04	2.0632E+02
5.5751E+02	5.4744E+02	2.8231E+06	-	2.4713E+05	4.4583E-02	-	1.4667E+04	1.2506E+03
5.5751E+02	4.8661E+02	3.1299E+06	-	2.4026E+05	4.4583E-02	-	1.4143E+04	5.7200E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.5751E+02	4.2579E+02	3.1449E+06	-	2.2653E+05	6.2500E-01	-	1.3619E+04	2.4908E+02
5.5751E+02	3.6496E+02	3.4081E+06	-	2.0594E+05	4.4583E-02	-	1.3096E+04	4.0594E+02
5.5751E+02	3.0413E+02	3.7574E+06	-	1.9221E+05	2.2292E-01	-	1.2572E+04	2.1988E+03
5.5751E+02	2.4331E+02	3.8500E+06	-	1.6475E+05	1.5538E-01	-	1.2048E+04	3.8585E+03
5.5751E+02	1.8248E+02	3.9152E+06	-	1.5102E+05	1.4335E+00	-	1.1524E+04	1.3521E+04
5.5751E+02	1.2165E+02	5.7667E+06	-	1.4416E+05	1.7010E+00	-	1.1000E+04	1.3549E+04
5.5751E+02	6.0827E+01	1.7484E+07	-	1.3729E+05	8.9167E-02	-	1.0476E+04	1.3320E+04
5.5751E+02	0.0000E+00	3.2987E+07	-	1.3043E+05	1.0594E+01	-	9.9526E+03	3.4665E+04
4.8448E+02	2.7980E+03	7.1417E-01	-	1.2356E+05	1.1220E+01	-	9.4288E+03	4.7673E+04
4.8448E+02	2.7372E+03	4.4583E-02	-	1.1670E+05	3.5559E+01	-	8.9050E+03	9.5914E+04
4.8448E+02	2.6764E+03	5.6000E+02	-	1.0983E+05	5.6576E+01	-	8.3811E+03	1.1143E+05
4.8448E+02	2.6155E+03	5.8663E+02	-	1.0297E+05	1.6868E+02	-	7.8573E+03	1.8413E+05
4.8448E+02	2.5547E+03	4.6881E+01	-	9.6104E+04	7.2337E+01	-	7.3335E+03	3.3704E+05
4.8448E+02	2.4939E+03	1.7804E+02	-	8.9240E+04	1.0242E+02	-	6.8097E+03	4.0952E+05
4.8448E+02	2.4331E+03	8.5379E+01	-	8.2375E+04	2.5125E+02	-	6.2859E+03	6.9030E+05
4.8448E+02	2.3722E+03	1.0389E+03	-	7.5511E+04	2.9292E+03	-	5.7620E+03	8.5977E+05
4.8448E+02	2.3114E+03	1.3527E+03	-	6.8646E+04	3.6073E+03	-	5.2382E+03	1.3978E+06
4.8448E+02	2.2506E+03	3.1441E+02	-	6.1781E+04	8.7231E+03	-	4.7144E+03	1.6152E+06
4.8448E+02	2.1898E+03	2.8579E+03	-	5.4917E+04	1.9172E+04	-	4.1906E+03	2.0185E+06
4.8448E+02	2.1289E+03	3.3487E+03	-	4.8052E+04	4.3195E+04	-	3.6667E+03	2.5906E+06
4.8448E+02	2.0681E+03	5.2249E+02	-	4.1188E+04	1.2155E+05	-	3.1429E+03	3.0190E+06
4.8448E+02	2.0073E+03	7.9379E+03	-	3.4323E+04	2.9942E+05	-	2.6191E+03	3.0819E+06
4.8448E+02	1.9465E+03	3.6790E+03	-	2.7458E+04	5.7252E+05	-	2.0953E+03	3.2717E+06
4.8448E+02	1.8856E+03	5.6286E+03	-	2.0594E+04	1.1594E+06	-	1.5715E+03	3.1668E+06
4.8448E+02	1.8248E+03	7.1069E+03	-	1.3729E+04	1.5091E+06	-	1.0476E+03	4.6693E+06
4.8448E+02	1.7640E+03	7.7080E+03	-	6.8646E+03	3.2672E+06	-	5.2382E+02	1.0780E+07
4.8448E+02	1.7031E+03	1.2663E+04	-	0.0000E+00	7.2231E+06	-	0.0000E+00	2.1870E+07

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.8448E+02	1.6423E+03	2.6026E+04	-	3.4323E+05	1.3443E+00	-	2.0429E+04	8.3361E+01
4.8448E+02	1.5815E+03	2.8463E+04	-	3.2264E+05	5.2085E+00	-	1.8858E+04	6.2500E-01
4.8448E+02	1.5207E+03	3.6196E+04	-	3.0891E+05	5.2085E+00	-	1.8334E+04	5.1830E-01
4.8448E+02	1.4598E+03	4.3402E+04	-	2.8831E+05	1.7500E+00	-	1.7810E+04	5.1888E+00
4.8448E+02	1.3990E+03	5.9867E+04	-	2.7458E+05	3.5000E+00	-	1.7286E+04	1.9305E+01
4.8448E+02	1.3382E+03	6.7026E+04	-	2.6772E+05	3.1389E+00	-	1.6762E+04	1.2729E+01
4.8448E+02	1.2774E+03	7.5900E+04	-	2.6085E+05	9.3750E+00	-	1.6238E+04	1.4617E+02
4.8448E+02	1.2165E+03	1.0685E+05	-	2.2653E+05	4.4583E-02	-	1.5715E+04	1.3448E+01
4.8448E+02	1.1557E+03	1.6486E+05	-	2.1967E+05	2.4642E+00	-	1.5191E+04	1.8381E+02
4.8448E+02	1.0949E+03	1.6988E+05	-	2.1280E+05	4.4583E-02	-	1.4667E+04	2.3131E+01
4.8448E+02	1.0341E+03	2.4367E+05	-	1.9907E+05	4.4583E-02	-	1.4143E+04	7.4761E+02
4.8448E+02	9.7323E+02	2.8233E+05	-	1.8534E+05	7.1417E-01	-	1.3619E+04	1.0754E+02
4.8448E+02	9.1240E+02	3.7583E+05	-	1.7848E+05	1.3375E-01	-	1.3096E+04	1.5968E+02
4.8448E+02	8.5157E+02	4.7145E+05	-	1.6475E+05	4.4583E-02	-	1.2572E+04	1.6686E+02
4.8448E+02	7.9075E+02	5.2170E+05	-	1.5789E+05	8.2900E-02	-	1.2048E+04	1.9834E+02
4.8448E+02	7.2992E+02	5.6060E+05	-	1.5102E+05	7.5875E-01	-	1.1524E+04	1.5947E+03
4.8448E+02	6.6909E+02	6.2954E+05	-	1.4416E+05	2.7675E+00	-	1.1000E+04	3.0225E+02
4.8448E+02	6.0827E+02	8.6222E+05	-	1.3729E+05	1.1592E+01	-	1.0476E+04	1.3007E+03
4.8448E+02	5.4744E+02	8.3370E+05	-	1.3043E+05	2.2139E+00	-	9.9526E+03	1.7679E+03
4.8448E+02	4.8661E+02	1.2007E+06	-	1.2356E+05	2.8446E+01	-	9.4288E+03	6.4603E+03
4.8448E+02	4.2579E+02	1.5978E+06	-	1.1670E+05	7.9272E+01	-	8.9050E+03	1.2510E+04
4.8448E+02	3.6496E+02	2.3113E+06	-	1.0983E+05	1.7640E+03	-	8.3811E+03	2.3259E+04
4.8448E+02	3.0413E+02	3.3748E+06	-	1.0297E+05	1.7946E+03	-	7.8573E+03	3.1327E+04
4.8448E+02	2.4331E+02	4.7905E+06	-	9.6104E+04	2.0224E+03	-	7.3335E+03	1.2169E+05
4.8448E+02	1.8248E+02	5.5511E+06	-	8.9240E+04	1.2111E+03	-	6.8097E+03	2.3399E+05
4.8448E+02	1.2165E+02	7.4221E+06	-	8.2375E+04	3.4593E+03	-	6.2859E+03	3.1260E+05
4.8448E+02	6.0827E+01	2.0629E+07	-	7.5511E+04	5.0223E+03	-	5.7620E+05	4.7835E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.8448E+02	0.0000E+00	3.8521E+07	-	6.8646E+04	7.9259E+03	-	5.2382E+03	6.6390E+05
4.1145E+02	2.9197E+03	4.4583E-02	-	6.1781E+04	1.8512E+04	-	4.7144E+03	1.1164E+06
4.1145E+02	2.7372E+03	1.3443E+00	-	5.4917E+04	4.2851E+04	-	4.1906E+03	1.3639E+06
4.1145E+02	2.6764E+03	1.1213E+03	-	4.8052E+04	5.1652E+04	-	3.6667E+03	1.6850E+06
4.1145E+02	2.6155E+03	5.2085E+00	-	4.1188E+04	1.6887E+05	-	3.1429E+03	1.8557E+06
4.1145E+02	2.5547E+03	6.1217E+00	-	3.4323E+04	4.3460E+05	-	2.6191E+03	2.1621E+06
4.1145E+02	2.4939E+03	2.3798E+01	-	2.7458E+04	1.2334E+06	-	2.0953E+03	1.9444E+06
4.1145E+02	2.4331E+03	2.7409E+01	-	2.0594E+04	2.4051E+06	-	1.5715E+03	1.8262E+06
4.1145E+02	2.3722E+03	1.5168E+02	-	1.3729E+04	4.0524E+06	-	1.0476E+03	3.0504E+06
4.1145E+02	2.3114E+03	6.7304E+01	-	6.8646E+03	7.6104E+06	-	5.2382E+02	6.4632E+06
4.1145E+02	2.2506E+03	4.0791E+02	-	0.0000E+00	1.3948E+07	-	0.0000E+00	1.3146E+07
4.1145E+02	2.1898E+03	2.2254E+02	-	3.2264E+05	1.3443E+00	-	2.0429E+04	4.4583E-02
4.1145E+02	2.1289E+03	3.0324E+02	-	3.1577E+05	1.3443E+00	-	1.8858E+04	4.4583E-02
4.1145E+02	2.0681E+03	4.2926E+02	-	3.0891E+05	1.3443E+00	-	1.7810E+04	4.2913E-01
4.1145E+02	2.0073E+03	3.8507E+02	-	3.0204E+05	1.3443E+00	-	1.7286E+04	8.5826E-01
4.1145E+02	1.9465E+03	7.5177E+02	-	2.9518E+05	4.4387E+00	-	1.6762E+04	4.2913E-01
4.1145E+02	1.8856E+03	2.2633E+03	-	2.8831E+05	6.5943E+00	-	1.6238E+04	9.5194E+00
4.1145E+02	1.8248E+03	7.1472E+03	-	2.8145E+05	7.0000E+00	-	1.5715E+04	1.1184E+00
4.1145E+02	1.7640E+03	2.0881E+03	-	2.7458E+05	8.3889E+00	-	1.5191E+04	3.0250E+01
4.1145E+02	1.7031E+03	3.2251E+03	-	2.6772E+05	4.8889E+00	-	1.4667E+04	1.0515E+01
4.1145E+02	1.6423E+03	3.5542E+03	-	2.6085E+05	1.7500E+00	-	1.4143E+04	5.9992E+01
4.1145E+02	1.5815E+03	1.1718E+04	-	2.4713E+05	9.3335E+00	-	1.3619E+04	1.0274E+01
4.1145E+02	1.5207E+03	3.2116E+03	-	2.4026E+05	4.4583E-02	-	1.3096E+04	1.9520E+01
4.1145E+02	1.4598E+03	6.0892E+03	-	2.3340E+05	5.2500E+00	-	1.2572E+04	1.0657E+01
4.1145E+02	1.3990E+03	1.2467E+04	-	2.2653E+05	7.1417E-01	-	1.2048E+04	7.5499E+01
4.1145E+02	1.3382E+03	1.8020E+04	-	2.1967E+05	1.2946E+00	-	1.1524E+04	1.1447E+02
4.1145E+02	1.2774E+03	1.5086E+04	-	2.0594E+05	4.4583E-02	-	1.1000E+04	5.0210E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.1145E+02	1.2165E+03	2.0147E+04	-	1.9907E+05	1.7500E+00	-	1.0476E+04	1.3601E+01
4.1145E+02	1.1557E+03	3.2677E+04	-	1.9221E+05	2.4642E+00	-	9.9526E+03	1.2688E+02
4.1145E+02	1.0949E+03	3.4987E+04	-	1.8534E+05	8.9167E-02	-	9.4288E+03	1.9281E+02
4.1145E+02	1.0341E+03	6.9376E+04	-	1.7848E+05	1.3375E-01	-	8.9050E+03	1.7123E+03
4.1145E+02	9.7323E+02	6.1312E+04	-	1.7161E+05	7.5875E-01	-	8.3811E+03	9.1928E+03
4.1145E+02	9.1240E+02	8.0030E+04	-	1.6475E+05	6.2500E-01	-	7.8573E+03	8.1930E+03
4.1145E+02	8.5157E+02	9.6973E+04	-	1.5789E+05	4.4583E-02	-	7.3335E+03	2.0622E+04
4.1145E+02	7.9075E+02	1.4206E+05	-	1.5102E+05	1.2837E+01	-	6.8097E+03	3.1241E+04
4.1145E+02	7.2992E+02	1.6192E+05	-	1.4416E+05	2.0554E+01	-	6.2859E+03	7.7491E+04
4.1145E+02	6.6909E+02	1.6975E+05	-	1.3729E+05	9.8553E+01	-	5.7620E+03	1.1636E+05
4.1145E+02	6.0827E+02	2.3243E+05	-	1.3043E+05	2.6845E+01	-	5.2382E+03	2.9282E+05
4.1145E+02	5.4744E+02	3.5557E+05	-	1.2356E+05	9.6012E+01	-	4.7144E+03	5.1530E+05
4.1145E+02	4.8661E+02	6.3887E+05	-	1.1670E+05	5.5499E+01	-	4.1906E+03	7.0394E+05
4.1145E+02	4.2579E+02	8.8277E+05	-	1.0983E+05	1.1975E+02	-	3.6667E+03	8.2041E+05
4.1145E+02	3.6496E+02	1.8359E+06	-	1.0297E+05	1.6507E+02	-	3.1429E+03	9.1466E+05
4.1145E+02	3.0413E+02	3.0751E+06	-	9.6104E+04	3.8173E+02	-	2.6191E+03	1.1215E+06
4.1145E+02	2.4331E+02	4.6676E+06	-	8.9240E+04	4.7748E+02	-	2.0953E+03	1.2099E+06
4.1145E+02	1.8248E+02	6.5720E+06	-	8.2375E+04	4.1887E+03	-	1.5715E+03	9.1516E+05
4.1145E+02	1.2165E+02	7.1647E+06	-	7.5511E+04	9.0748E+03	-	1.0476E+03	1.6890E+06
4.1145E+02	6.0827E+01	1.7442E+07	-	6.8646E+04	4.1357E+03	-	5.2382E+02	4.0428E+06
4.1145E+02	0.0000E+00	3.8312E+07	-	6.1781E+04	3.0535E+04	-	0.0000E+00	8.0172E+06
3.3841E+02	2.6764E+03	1.0053E+01	-	5.4917E+04	5.5042E+04	-	2.1477E+04	4.4583E-02
3.3841E+02	2.6155E+03	5.2085E+00	-	4.8052E+04	1.1287E+05	-	2.0429E+04	6.2500E-01
3.3841E+02	2.5547E+03	4.4583E-02	-	4.1188E+04	2.4177E+05	-	1.7810E+04	6.2500E-01
3.3841E+02	2.4939E+03	7.5776E+00	-	3.4323E+04	5.8576E+05	-	1.6238E+04	1.1820E-01
3.3841E+02	2.4331E+03	2.6887E+00	-	2.7458E+04	1.4260E+06	-	1.4667E+04	3.8909E+00
3.3841E+02	2.3722E+03	1.9835E+01	-	2.0594E+04	4.0691E+06	-	1.4143E+04	6.3024E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.3841E+02	2.3114E+03	2.4125E+01	-	1.3729E+04	6.7707E+06	-	1.3619E+04	2.5540E+00
3.3841E+02	2.2506E+03	1.6969E+02	-	6.8646E+03	1.2090E+07	-	1.3096E+04	2.0958E+00
3.3841E+02	2.1898E+03	8.2590E+01	-	0.0000E+00	2.0448E+07	-	1.2572E+04	9.5372E+00
3.3841E+02	2.1289E+03	4.1479E+00	-	3.1577E+05	2.6887E+00	-	1.2048E+04	6.7520E+00
3.3841E+02	2.0681E+03	2.1412E+02	-	3.0891E+05	1.3443E+00	-	1.1524E+04	5.7358E+00
3.3841E+02	2.0073E+03	5.3770E+02	-	3.0204E+05	3.0943E+00	-	1.1000E+04	9.0240E+01
3.3841E+02	1.9465E+03	6.9169E+02	-	2.9518E+05	4.0331E+00	-	1.0476E+04	1.8030E+01
3.3841E+02	1.8856E+03	2.3535E+03	-	2.8831E+05	6.9585E+00	-	9.9526E+03	1.2497E+01
3.3841E+02	1.8248E+03	6.8037E+01	-	2.7458E+05	5.3774E+00	-	9.4288E+03	2.5603E+02
3.3841E+02	1.7640E+03	5.6730E+02	-	2.6772E+05	1.3511E+01	-	8.9050E+03	2.0092E+01
3.3841E+02	1.7031E+03	5.6656E+02	-	2.6085E+05	4.8443E+00	-	8.3811E+03	9.3179E+02
3.3841E+02	1.6423E+03	1.5785E+02	-	2.4713E+05	1.7500E+00	-	7.8573E+03	1.7381E+03
3.3841E+02	1.5815E+03	1.3400E+03	-	2.4026E+05	3.5000E+00	-	7.3335E+03	4.1857E+02
3.3841E+02	1.5207E+03	7.6230E+02	-	2.3340E+05	1.1042E+01	-	6.8097E+03	2.6799E+03
3.3841E+02	1.4598E+03	3.9210E+02	-	2.1280E+05	7.1417E-01	-	6.2859E+03	3.4050E+03
3.3841E+02	1.3990E+03	1.7947E+03	-	1.9221E+05	2.4196E+00	-	5.7620E+03	2.1792E+04
3.3841E+02	1.3382E+03	2.3403E+03	-	1.8534E+05	1.3375E-01	-	5.2382E+03	2.2795E+04
3.3841E+02	1.2774E+03	3.6687E+03	-	1.7848E+05	2.4078E-01	-	4.7144E+03	6.4076E+04
3.3841E+02	1.2165E+03	4.3679E+03	-	1.7161E+05	1.7207E-01	-	4.1906E+03	1.8620E+05
3.3841E+02	1.1557E+03	6.0843E+03	-	1.6475E+05	1.2081E+01	-	3.6667E+03	2.3152E+05
3.3841E+02	1.0949E+03	7.0520E+03	-	1.5789E+05	6.9688E+00	-	3.1429E+03	3.1995E+05
3.3841E+02	1.0341E+03	1.0378E+04	-	1.5102E+05	9.7921E+00	-	2.6191E+03	4.0019E+05
3.3841E+02	9.7323E+02	1.3403E+04	-	1.4416E+05	2.0455E+01	-	2.0953E+03	4.4578E+05
3.3841E+02	9.1240E+02	3.0490E+04	-	1.3729E+05	2.5390E+01	-	1.5715E+03	5.5995E+05
3.3841E+02	8.5157E+02	2.8352E+04	-	1.3043E+05	9.5462E+01	-	1.0476E+03	8.0048E+05
3.3841E+02	7.9075E+02	5.1053E+04	-	1.2356E+05	1.9297E+02	-	5.2382E+02	1.9030E+06
3.3841E+02	7.2992E+02	5.7248E+04	-	1.1670E+05	1.4102E+02	-	0.0000E+00	1.1047E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.3841E+02	6.6909E+02	1.6589E+05	-	1.0983E+05	1.0001E+03	-	2.2524E+04	4.4583E-02
3.3841E+02	6.0827E+02	2.3340E+05	-	1.0297E+05	9.9782E+02	-	2.0953E+04	4.4583E-02
3.3841E+02	5.4744E+02	3.1650E+05	-	9.6104E+04	1.4986E+03	-	1.9905E+04	1.3443E+00
3.3841E+02	4.8661E+02	5.6598E+05	-	8.9240E+04	3.7713E+03	-	1.6238E+04	8.3361E+01
3.3841E+02	4.2579E+02	1.1710E+06	-	8.2375E+04	3.0376E+03	-	1.4667E+04	2.5000E+00
3.3841E+02	3.6496E+02	1.8963E+06	-	7.5511E+04	1.6202E+04	-	1.4143E+04	2.5000E+00
3.3841E+02	3.0413E+02	3.4150E+06	-	6.8646E+04	1.2660E+04	-	1.3619E+04	8.9167E-02
3.3841E+02	2.4331E+02	5.7252E+06	-	6.1781E+04	1.9256E+04	-	1.3096E+04	9.1036E-01
3.3841E+02	1.8248E+02	7.1302E+06	-	5.4917E+04	3.1284E+04	-	1.2572E+04	9.5495E-01
3.3841E+02	1.2165E+02	8.4188E+06	-	4.8052E+04	1.0295E+05	-	1.2048E+04	1.9196E+00
3.3841E+02	6.0827E+01	1.2232E+07	-	4.1188E+04	1.9885E+05	-	1.1524E+04	2.4196E+00
3.3841E+02	0.0000E+00	3.3018E+07	-	3.4323E+04	4.1187E+05	-	1.1000E+04	4.5859E+00
2.6538E+02	2.9197E+03	1.3443E+00	-	2.7458E+04	1.2472E+06	-	1.0476E+04	6.4121E+00
2.6538E+02	2.7980E+03	1.7500E+00	-	2.0594E+04	3.1210E+06	-	9.9526E+03	5.0919E+00
2.6538E+02	2.7372E+03	9.6918E+00	-	1.3729E+04	5.2903E+06	-	9.4288E+03	1.8050E+01
2.6538E+02	2.6764E+03	1.3443E+00	-	6.8646E+03	9.5244E+06	-	8.9050E+03	2.6972E+00
2.6538E+02	2.5547E+03	2.6887E+00	-	0.0000E+00	1.6279E+07	-	8.3811E+03	1.0622E+01
2.6538E+02	2.4939E+03	1.6970E+01	-	3.1577E+05	1.3443E+00	-	7.8573E+03	4.7808E+01
2.6538E+02	2.4331E+03	8.0310E+00	-	3.0204E+05	8.3028E+00	-	7.3335E+03	6.7447E+00
2.6538E+02	2.3722E+03	4.4387E+00	-	2.9518E+05	1.6200E+01	-	6.8097E+03	2.8000E+02
2.6538E+02	2.3114E+03	8.5637E+00	-	2.8831E+05	3.0943E+00	-	6.2859E+03	3.3419E+02
2.6538E+02	2.2506E+03	1.1128E+01	-	2.8145E+05	1.7500E+00	-	5.7620E+03	1.0304E+03
2.6538E+02	2.1898E+03	1.3443E+00	-	2.7458E+05	3.0943E+00	-	5.2382E+03	5.0462E+03
2.6538E+02	2.1289E+03	6.3467E+01	-	2.6772E+05	4.4387E+00	-	4.7144E+03	7.7312E+03
2.6538E+02	2.0681E+03	1.2770E+01	-	2.6085E+05	6.2500E-01	-	4.1906E+03	5.6076E+03
2.6538E+02	2.0073E+03	2.7128E+01	-	2.5399E+05	1.1617E+01	-	3.6667E+03	4.5962E+04
2.6538E+02	1.9465E+03	6.8555E+00	-	2.4713E+05	4.8443E+00	-	3.1429E+05	5.3020E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.6538E+02	1.8856E+03	6.9288E+01	-	2.4026E+05	7.0000E+00	-	2.6191E+03	4.5633E+04
2.6538E+02	1.8248E+03	1.7833E-01	-	2.3340E+05	7.1337E+00	-	2.0953E+03	1.2053E+05
2.6538E+02	1.7640E+03	1.4911E+02	-	2.2653E+05	1.7500E+00	-	1.5715E+03	1.0645E+05
2.6538E+02	1.7031E+03	2.9187E+01	-	2.1967E+05	6.6958E-01	-	1.0476E+03	2.4700E+05
2.6538E+02	1.6423E+03	1.3509E+02	-	2.1280E+05	1.2500E+00	-	5.2382E+02	6.3826E+05
2.6538E+02	1.5815E+03	6.8368E+01	-	2.0594E+05	2.6609E+00	-	0.0000E+00	1.9022E+06
2.6538E+02	1.5207E+03	2.3298E+02	-	1.9907E+05	1.4109E+00	-	1.7286E+04	6.2500E-01
2.6538E+02	1.4598E+03	1.9282E+02	-	1.9221E+05	8.2480E+00	-	1.6238E+04	4.4583E-02
2.6538E+02	1.3990E+03	1.3846E+02	-	1.8534E+05	1.1277E+01	-	1.5715E+04	4.4583E-02
2.6538E+02	1.3382E+03	6.2500E+02	-	1.7848E+05	1.2593E+00	-	1.4667E+04	8.9167E-02
2.6538E+02	1.2774E+03	1.0015E+03	-	1.7161E+05	2.0772E+01	-	1.3619E+04	6.2500E-01
2.6538E+02	1.2165E+03	5.9638E+02	-	1.6475E+05	2.5447E+00	-	1.3096E+04	8.9167E-02
2.6538E+02	1.1557E+03	7.8894E+02	-	1.5789E+05	2.2590E+01	-	1.2048E+04	3.7142E+00
2.6538E+02	1.0949E+03	1.6414E+03	-	1.5102E+05	9.4613E+00	-	1.1524E+04	8.9167E-02
2.6538E+02	1.0341E+03	2.5181E+03	-	1.4416E+05	9.8445E+00	-	9.4288E+03	8.9167E-02
2.6538E+02	9.7323E+02	4.2109E+03	-	1.3729E+05	1.6980E+02	-	8.9050E+03	1.4724E-01
2.6538E+02	9.1240E+02	7.8047E+03	-	1.3043E+05	3.3959E+02	-	8.3811E+03	3.7216E+00
2.6538E+02	8.5157E+02	5.4634E+03	-	1.2356E+05	4.2796E+02	-	7.8573E+03	2.5553E+00
2.6538E+02	7.9075E+02	1.1305E+04	-	1.1670E+05	5.5924E+02	-	7.3335E+03	3.9658E+01
2.6538E+02	7.2992E+02	2.2770E+04	-	1.0983E+05	9.0800E+02	-	6.8097E+03	1.3140E+01
2.6538E+02	6.6909E+02	6.2361E+04	-	1.0297E+05	6.7812E+02	-	6.2859E+03	1.3526E+01
2.6538E+02	6.0827E+02	1.0002E+05	-	9.6104E+04	1.5679E+03	-	5.7620E+03	3.7627E+01
2.6538E+02	5.4744E+02	1.7454E+05	-	8.9240E+04	3.5130E+03	-	5.2382E+03	4.0869E+01
2.6538E+02	4.8661E+02	4.6922E+05	-	8.2375E+04	2.8995E+03	-	4.7144E+03	3.2091E+02
2.6538E+02	4.2579E+02	9.5362E+05	-	7.5511E+04	8.0241E+03	-	4.1906E+03	2.2586E+02
2.6538E+02	3.6496E+02	1.5979E+06	-	6.8646E+04	1.3149E+04	-	3.6667E+03	1.3019E+02
2.6538E+02	3.0413E+02	2.9760E+06	-	6.1781E+04	1.6331E+04	-	3.1429E+03	1.1717E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.6538E+02	2.4331E+02	4.9646E+06	-	5.4917E+04	6.8031E+04	-	2.6191E+03	1.0098E+04
2.6538E+02	1.8248E+02	6.9681E+06	-	4.8052E+04	1.1475E+05	-	2.0953E+03	4.5422E+03
2.6538E+02	1.2165E+02	8.7337E+06	-	4.1188E+04	2.9620E+05	-	1.5715E+03	1.4977E+04
2.6538E+02	6.0827E+01	1.2142E+07	-	3.4323E+04	8.3819E+05	-	1.0476E+03	8.0019E+04
2.6538E+02	0.0000E+00	3.5098E+07	-	2.7458E+04	1.5480E+06	-	5.2382E+02	1.1882E+05
1.9235E+02	2.7980E+03	4.4583E-02	-	2.0594E+04	2.6064E+06	-	0.0000E+00	4.5178E+05
1.9235E+02	2.6764E+03	5.2085E+00	-	1.3729E+04	3.9790E+06	-	2.1477E+04	4.4583E-02
1.9235E+02	2.6155E+03	1.4335E+00	-	6.8646E+03	7.4647E+06	-	1.7286E+04	4.4583E-02
1.9235E+02	2.5547E+03	3.7193E+00	-	0.0000E+00	1.1627E+07	-	1.5715E+04	6.2500E-01
1.9235E+02	2.4939E+03	1.3443E+00	-	3.3637E+05	1.3443E+00	-	1.5191E+04	6.2500E-01
1.9235E+02	2.4331E+03	1.8392E+00	-	3.0891E+05	1.3443E+00	-	1.4143E+04	6.2500E-01
1.9235E+02	2.3722E+03	5.2500E+00	-	2.8831E+05	5.2085E+00	-	8.9050E+03	8.5826E-01
1.9235E+02	2.3114E+03	3.1835E+00	-	2.8145E+05	8.3028E+00	-	8.3811E+03	1.7833E-01
1.9235E+02	2.2506E+03	3.1389E+00	-	2.7458E+05	1.7500E+00	-	7.8573E+03	2.9448E-01
1.9235E+02	2.1898E+03	7.1368E+00	-	2.6772E+05	5.7830E+00	-	7.3335E+03	4.9957E+01
1.9235E+02	2.1289E+03	4.1696E+00	-	2.6085E+05	1.6970E+01	-	6.8097E+03	1.6971E+00
1.9235E+02	2.0681E+03	1.2479E+01	-	2.5399E+05	5.2085E+00	-	6.2859E+03	1.7538E+02
1.9235E+02	2.0073E+03	7.2706E+00	-	2.4713E+05	9.3730E+00	-	5.7620E+03	1.9829E+02
1.9235E+02	1.9465E+03	2.9632E+01	-	2.4026E+05	3.5446E+00	-	5.2382E+03	4.8601E+01
1.9235E+02	1.8856E+03	2.1504E+01	-	2.3340E+05	3.3531E+00	-	4.7144E+03	5.1545E+01
1.9235E+02	1.8248E+03	6.4468E+01	-	2.2653E+05	1.9450E+01	-	4.1906E+03	2.3143E+02
1.9235E+02	1.7640E+03	1.3502E+01	-	2.1967E+05	1.2448E+00	-	3.6667E+03	6.0495E+01
1.9235E+02	1.7031E+03	4.3828E+01	-	2.1280E+05	1.4146E+01	-	3.1429E+03	1.8812E+02
1.9235E+02	1.6423E+03	1.1307E+02	-	2.0594E+05	5.6035E+00	-	2.6191E+03	1.1078E+02
1.9235E+02	1.5815E+03	1.4814E+02	-	1.9907E+05	1.3039E+00	-	2.0953E+03	2.3191E+02
1.9235E+02	1.5207E+03	1.2295E+02	-	1.9221E+05	2.1502E+01	-	1.5715E+03	2.1265E+02
1.9235E+02	1.4598E+03	9.1839E+01	-	1.8534E+05	6.5259E+00	-	1.0476E+03	1.5020E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.9235E+02	1.3990E+03	1.4111E+02	-	1.7848E+05	4.0188E+00	-	5.2382E+02	1.1585E+04
1.9235E+02	1.3382E+03	1.1776E+02	-	1.7161E+05	1.0919E+01	-	0.0000E+00	7.6154E+04
1.9235E+02	1.2774E+03	2.1760E+02	-	1.6475E+05	2.6028E+00	-	1.7810E+04	4.4583E-02
1.9235E+02	1.2165E+03	2.2956E+02	-	1.5789E+05	2.2458E+01	-	1.6762E+04	4.4583E-02
1.9235E+02	1.1557E+03	3.4657E+02	-	1.5102E+05	1.0610E+02	-	1.5191E+04	1.3443E+00
1.9235E+02	1.0949E+03	4.5590E+02	-	1.4416E+05	1.0893E+02	-	8.9050E+03	1.7961E+01
1.9235E+02	1.0341E+03	1.1656E+03	-	1.3729E+05	3.0286E+01	-	8.3811E+03	8.9167E-02
1.9235E+02	9.7323E+02	1.0474E+03	-	1.3043E+05	8.4531E+01	-	7.8573E+03	1.4283E+00
1.9235E+02	9.1240E+02	1.4379E+03	-	1.2356E+05	6.2621E+02	-	6.8097E+03	2.5855E+01
1.9235E+02	8.5157E+02	1.8089E+03	-	1.1670E+05	5.3889E+02	-	6.2859E+03	8.5826E-01
1.9235E+02	7.9075E+02	7.3243E+03	-	1.0983E+05	2.8378E+03	-	5.7620E+03	2.1733E+00
1.9235E+02	7.2992E+02	1.6489E+04	-	1.0297E+05	1.2535E+03	-	5.2382E+03	1.0378E+01
1.9235E+02	6.6909E+02	3.2608E+04	-	9.6104E+04	3.9130E+03	-	4.7144E+03	2.9833E+01
1.9235E+02	6.0827E+02	7.8107E+04	-	8.9240E+04	2.4705E+03	-	3.6667E+03	1.0582E+01
1.9235E+02	5.4744E+02	1.0546E+05	-	8.2375E+04	3.9636E+03	-	3.1429E+03	4.5901E+01
1.9235E+02	4.8661E+02	2.5322E+05	-	7.5511E+04	8.9748E+03	-	2.6191E+03	1.0267E+01
1.9235E+02	4.2579E+02	4.7735E+05	-	6.8646E+04	1.7506E+04	-	2.0953E+03	7.4996E+01
1.9235E+02	3.6496E+02	1.1720E+06	-	6.1781E+04	3.3792E+04	-	1.5715E+03	1.9420E+02
1.9235E+02	3.0413E+02	2.5292E+06	-	5.4917E+04	7.2208E+04	-	1.0476E+03	2.5030E+02
1.9235E+02	2.4331E+02	5.7273E+06	-	4.8052E+04	1.1053E+05	-	5.2382E+02	1.4299E+03
1.9235E+02	1.8248E+02	1.0116E+07	-	4.1188E+04	3.3195E+05	-	0.0000E+00	1.5918E+04
1.9235E+02	1.2165E+02	1.4377E+07	-	3.4323E+04	6.7695E+05	-	2.6191E+04	4.4583E-02
1.9235E+02	6.0827E+01	1.9918E+07	-	2.7458E+04	1.3620E+06	-	1.7810E+04	4.4583E-02
1.9235E+02	0.0000E+00	4.7255E+07	-	2.0594E+04	2.7636E+06	-	8.9050E+03	3.9387E+00
1.1931E+02	2.7980E+03	1.7946E+00	-	1.3729E+04	4.3415E+06	-	6.8097E+03	1.6941E+02
1.1931E+02	2.7372E+03	1.7500E+00	-	6.8646E+03	6.5368E+06	-	6.2859E+03	5.7425E+00
1.1931E+02	2.6764E+03	1.7946E+00	-	0.0000E+00	9.0928E+06	-	5.7620E+03	5.7620E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.1931E+02	2.6155E+03	1.7500E+00	-	2.9518E+05	5.2085E+00	-	5.2382E+03	1.2500E+00
1.1931E+02	2.5547E+03	6.6420E+00	-	2.7458E+05	5.2085E+00	-	4.7144E+03	3.5892E+00
1.1931E+02	2.4331E+03	7.0031E+00	-	2.6772E+05	1.3443E+00	-	4.1906E+03	3.2531E+01
1.1931E+02	2.3722E+03	5.2500E+00	-	2.5399E+05	1.3406E+01	-	3.6667E+03	2.6887E+00
1.1931E+02	2.3114E+03	1.3443E+00	-	2.4713E+05	5.2085E+00	-	3.1429E+03	5.3355E+01
1.1931E+02	2.2506E+03	1.8392E+00	-	2.4026E+05	5.2085E+00	-	2.6191E+03	1.4439E+01
1.1931E+02	2.1898E+03	4.4583E-02	-	2.2653E+05	7.6230E+00	-	2.0953E+03	3.9248E+01
1.1931E+02	2.1289E+03	2.1031E+00	-	2.1967E+05	4.1744E+00	-	1.5715E+03	6.7760E+00
1.1931E+02	2.0681E+03	4.4583E-02	-	2.1280E+05	1.1117E+01	-	1.0476E+03	2.2453E+02
1.1931E+02	1.9465E+03	1.1354E+01	-	2.0594E+05	4.0952E+01	-	5.2382E+02	4.0727E+02
1.1931E+02	1.8856E+03	1.2345E+01	-	1.9907E+05	8.4730E+00	-	0.0000E+00	1.1351E+03
1.1931E+02	1.8248E+03	1.1532E+01	-	1.9221E+05	4.1480E+01	-	8.9050E+03	1.7833E-01
1.1931E+02	1.7640E+03	1.0551E+01	-	1.8534E+05	1.0542E+01	-	8.3811E+03	8.9167E-02
1.1931E+02	1.7031E+03	4.1980E+01	-	1.7848E+05	3.3109E+00	-	7.8573E+03	8.9167E-02
1.1931E+02	1.6423E+03	4.3796E+01	-	1.7161E+05	4.9636E+00	-	7.3335E+03	8.9167E-02
1.1931E+02	1.5815E+03	6.3921E+01	-	1.6475E+05	2.2931E+01	-	6.8097E+03	1.6448E+00
1.1931E+02	1.5207E+03	8.4178E+01	-	1.5789E+05	2.2472E+01	-	6.2859E+03	1.4724E-01
1.1931E+02	1.4598E+03	4.3417E+01	-	1.5102E+05	2.3698E+02	-	4.7144E+03	1.0711E+01
1.1931E+02	1.3990E+03	1.4305E+02	-	1.4416E+05	5.0240E+01	-	4.1906E+03	5.2945E+00
1.1931E+02	1.3382E+03	1.6073E+02	-	1.3729E+05	4.0661E+02	-	3.6667E+03	2.1447E+01
1.1931E+02	1.2774E+03	2.1774E+02	-	1.3043E+05	8.7230E+02	-	3.1429E+03	4.3858E+00
1.1931E+02	1.2165E+03	2.2489E+02	-	1.2356E+05	3.6943E+02	-	2.6191E+03	1.3869E+00
1.1931E+02	1.1557E+03	2.6529E+02	-	1.1670E+05	5.5814E+03	-	2.0953E+03	1.1466E+01
1.1931E+02	1.0949E+03	3.1328E+02	-	1.0983E+05	3.4149E+03	-	1.5715E+03	8.5826E-01
1.1931E+02	1.0341E+03	2.9286E+02	-	1.0297E+05	6.8719E+03	-	1.0476E+03	1.5691E+01
1.1931E+02	9.7323E+02	4.2220E+02	-	9.6104E+04	1.1111E+04	-	5.2382E+02	3.8803E+01
1.1931E+02	9.1240E+02	2.4532E+03	-	8.9240E+04	3.0704E+04	-	0.0000E+00	1.3870E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.1931E+02	8.5157E+02	2.1976E+03	-	8.2375E+04	1.5412E+04	-	2.4096E+04	4.4583E-02
1.1931E+02	7.9075E+02	6.3194E+03	-	7.5511E+04	2.7652E+04	-	1.2048E+04	8.9167E-02
1.1931E+02	7.2992E+02	9.6635E+03	-	6.8646E+04	1.3862E+04	-	7.3335E+03	1.2500E+00
1.1931E+02	6.6909E+02	1.7682E+04	-	6.1781E+04	2.6810E+04	-	6.2859E+03	2.7779E+00
1.1931E+02	6.0827E+02	3.9013E+04	-	5.4917E+04	6.9125E+04	-	4.7144E+03	1.2500E+00
1.1931E+02	5.4744E+02	7.1046E+04	-	4.8052E+04	1.1541E+05	-	3.6667E+03	8.5826E-01
1.1931E+02	4.8661E+02	2.0229E+05	-	4.1188E+04	2.5436E+05	-	3.1429E+03	1.2500E+00
1.1931E+02	4.2579E+02	4.0259E+05	-	3.4323E+04	6.9288E+05	-	2.6191E+03	1.7833E-01
1.1931E+02	3.6496E+02	9.8218E+05	-	2.7458E+04	1.5571E+06	-	2.0953E+03	1.0055E+00
1.1931E+02	3.0413E+02	2.1016E+06	-	2.0594E+04	3.1333E+06	-	1.5715E+03	3.5892E+00
1.1931E+02	2.4331E+02	4.0391E+06	-	1.3729E+04	4.5699E+06	-	1.0476E+03	1.3051E+01
1.1931E+02	1.8248E+02	7.3883E+06	-	6.8646E+03	7.0981E+06	-	5.2382E+02	4.9316E+01
1.1931E+02	1.2165E+02	1.0156E+07	-	0.0000E+00	1.0703E+07	-	0.0000E+00	2.0499E+02
1.1931E+02	6.0827E+01	1.4998E+07	-	2.5399E+05	2.6887E+00	-	3.1429E+03	2.8359E+00
1.1931E+02	0.0000E+00	3.8454E+07	-	2.4713E+05	4.0331E+00	-	2.6191E+03	8.5826E-01
4.6278E+01	2.8588E+03	1.3443E+00	-	2.4026E+05	4.5800E+00	-	1.0476E+03	8.5826E-01
4.6278E+01	2.6764E+03	1.7500E+00	-	2.2653E+05	2.6887E+00	-	5.2382E+02	3.2155E+01
4.6278E+01	2.6155E+03	1.3443E+00	-	2.1967E+05	4.0996E+00	-	0.0000E+00	1.0404E+01
4.6278E+01	2.5547E+03	4.8443E+00	-	2.1280E+05	6.3894E+00	-	5.2382E+03	8.9167E-02
4.6278E+01	2.4939E+03	6.2500E-01	-	2.0594E+05	4.7141E+00	-	1.0476E+03	1.6079E+00
4.6278E+01	2.4331E+03	8.9167E-02	-	1.9907E+05	2.4078E-01	-	5.2382E+02	3.7834E+00
4.6278E+01	2.2506E+03	1.3375E-01	-	1.9221E+05	2.1440E+01	-	0.0000E+00	5.7682E+00
4.6278E+01	2.1898E+03	1.4335E+00	-	1.8534E+05	1.3993E+01	-	5.2382E+03	8.9167E-02
4.6278E+01	2.1289E+03	8.9167E-02	-	1.7848E+05	1.3097E+01	-	0.0000E+00	3.0309E+00
4.6278E+01	2.0073E+03	1.3375E-01	-	1.7161E+05	4.7877E+01	-	5.2382E+02	1.2500E+00
4.6278E+01	1.9465E+03	4.4583E-02	-	1.6475E+05	9.4112E+01	-	0.0000E+00	1.7833E-01
4.6278E+01	1.8856E+03	4.4583E-02	-	1.5789E+05	1.5794E+02	-	5.2382E+02	8.5826E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6278E+01	1.8248E+03	1.1131E+01	- 6.4974E+04	1.5102E+05	2.3350E+02	- 1.2934E+04	1.0476E+03	8.9167E-02
4.6278E+01	1.7640E+03	1.3375E-01	- 6.4974E+04	1.4416E+05	5.8820E+02			
4.6278E+01	1.7031E+03	2.5950E+01	- 6.4974E+04	1.3729E+05	1.9217E+02			
4.6278E+01	1.6423E+03	3.5446E+00	- 6.4974E+04	1.3043E+05	2.9881E+03			
4.6278E+01	1.5815E+03	3.5465E+01	- 6.4974E+04	1.2356E+05	6.2402E+03			
4.6278E+01	1.5207E+03	1.3145E+01	- 6.4974E+04	1.1670E+05	6.5243E+03			
4.6278E+01	1.4598E+03	2.7785E+01	- 6.4974E+04	1.0983E+05	3.4153E+03			
4.6278E+01	1.3990E+03	1.4600E+01	- 6.4974E+04	1.0297E+05	1.3655E+04			
4.6278E+01	1.3382E+03	2.8307E+01	- 6.4974E+04	9.6104E+04	1.5933E+04			
4.6278E+01	1.2774E+03	3.7143E+01	- 6.4974E+04	8.9240E+04	1.5631E+04			
4.6278E+01	1.2165E+03	7.5860E+01	- 6.4974E+04	8.2375E+04	3.0720E+04			
4.6278E+01	1.1557E+03	3.7815E+01	- 6.4974E+04	7.5511E+04	3.4349E+04			
4.6278E+01	1.0949E+03	8.8673E+01	- 6.4974E+04	6.8646E+04	3.0769E+04			
4.6278E+01	1.0341E+03	8.6206E+01	- 6.4974E+04	6.1781E+04	5.5551E+04			
4.6278E+01	9.7323E+02	9.0471E+01	- 6.4974E+04	5.4917E+04	6.6075E+04			
4.6278E+01	9.1240E+02	9.6421E+01	- 6.4974E+04	4.8052E+04	1.0370E+05			
4.6278E+01	8.5157E+02	1.0554E+04	- 6.4974E+04	4.1188E+04	2.0831E+05			
4.6278E+01	7.9075E+02	1.8745E+03	- 6.4974E+04	3.4323E+04	4.4568E+05			
4.6278E+01	7.2992E+02	1.6142E+04	- 6.4974E+04	2.7458E+04	1.2853E+06			
4.6278E+01	6.6909E+02	4.6970E+04	- 6.4974E+04	2.0594E+04	2.2853E+06			
4.6278E+01	6.0827E+02	6.5581E+04	- 6.4974E+04	1.3729E+04	4.1867E+06			
4.6278E+01	5.4744E+02	6.2091E+04	- 6.4974E+04	6.8646E+03	5.9047E+06			
4.6278E+01	4.8661E+02	7.7941E+04	- 6.4974E+04	0.0000E+00	1.1665E+07			
4.6278E+01	4.2579E+02	1.6114E+05	- 7.2866E+04	2.4713E+05	6.2500E-01			
4.6278E+01	3.6496E+02	3.6880E+05	- 7.2866E+04	2.4026E+05	8.0385E+00			
4.6278E+01	3.0413E+02	8.4117E+05	- 7.2866E+04	2.3340E+05	1.3443E+00			
4.6278E+01	2.4331E+02	1.5809E+06	- 7.2866E+04	2.2653E+05	2.8300E+00			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6278E+01	1.8248E+02	2.5908E+06	-	2.1280E+05	1.1459E+01			
4.6278E+01	1.2165E+02	4.4662E+06	-	2.0594E+05	8.9674E+00			
4.6278E+01	6.0827E+01	9.0400E+06	-	1.9907E+05	1.5488E+01			
4.6278E+01	0.0000E+00	2.7169E+07	-	1.9221E+05	3.9199E+01			
-	2.7980E+03	1.7500E+00	-	1.8534E+05	3.8133E+01			
-	2.4939E+03	1.7500E+00	-	1.7848E+05	1.7961E+01			
-	2.4331E+03	4.4583E-02	-	1.7161E+05	4.1258E+00			
-	2.2506E+03	4.4583E-02	-	1.6475E+05	7.8575E+01			
-	2.1898E+03	8.9167E-02	-	1.5789E+05	7.7629E+02			
-	1.8856E+03	4.4583E-02	-	1.5102E+05	4.6881E+02			
-	1.8248E+03	1.3375E-01	-	1.4416E+05	2.4763E+03			
-	1.7640E+03	3.5446E+00	-	1.3729E+05	1.8280E+03			
-	1.7031E+03	4.4583E-02	-	1.3043E+05	3.4774E+03			
-	1.6423E+03	4.4583E-02	-	1.2356E+05	2.6249E+03			
-	1.5815E+03	3.1609E+00	-	1.1670E+05	6.1674E+03			
-	1.5207E+03	1.5227E+00	-	1.0983E+05	4.8826E+03			
-	1.4598E+03	9.7707E+00	-	1.0297E+05	2.2763E+04			
-	1.3990E+03	2.7727E+00	-	9.6104E+04	1.6778E+04			
-	1.3382E+03	5.6442E+00	-	8.9240E+04	3.2402E+04			
-	1.2774E+03	1.4720E+01	-	8.2375E+04	3.8085E+04			
-	1.2165E+03	5.0272E+01	-	7.5511E+04	6.5648E+04			
-	1.1557E+03	1.6187E+01	-	6.8646E+04	8.2140E+04			
-	1.0949E+03	4.2780E+01	-	6.1781E+04	1.3552E+05			
-	1.0341E+03	6.7363E+01	-	5.4917E+04	1.5122E+05			
-	9.7323E+02	5.5730E+01	-	4.8052E+04	2.4498E+05			
-	9.1240E+02	1.1792E+02	-	4.1188E+04	3.0832E+05			
-	8.5157E+02	1.0454E+04	-	3.4323E+04	5.7445E+05			



Document:
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Foundation loads – EV162-6.8/7.2MW HH169m HA2A90APage
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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.6755E+01	7.9075E+02	1.5688E+04	7.2866E+04	2.7458E+04	1.1440E+06			
-			-					
2.6755E+01	7.2992E+02	1.5729E+04	7.2866E+04	2.0594E+04	2.8828E+06			
-			-					
2.6755E+01	6.6909E+02	4.1837E+04	7.2866E+04	1.3729E+04	4.0375E+06			
-			-					
2.6755E+01	6.0827E+02	7.9413E+04	7.2866E+04	6.8646E+03	5.7489E+06			
-			-					
2.6755E+01	5.4744E+02	1.2750E+05	7.2866E+04	0.0000E+00	1.4795E+07			
-			-					
2.6755E+01	4.8661E+02	1.1470E+05	8.0759E+04	2.1967E+05	2.8300E+00			
-			-					
2.6755E+01	4.2579E+02	1.0906E+05	8.0759E+04	2.0594E+05	4.9785E+00			
-			-					
2.6755E+01	3.6496E+02	2.4004E+05	8.0759E+04	1.9907E+05	1.0115E+01			
-			-					
2.6755E+01	3.0413E+02	2.9170E+05	8.0759E+04	1.9221E+05	1.5309E+02			
-			-					
2.6755E+01	2.4331E+02	4.2216E+05	8.0759E+04	1.8534E+05	1.5596E+02			
-			-					
2.6755E+01	1.8248E+02	1.5558E+06	8.0759E+04	1.7848E+05	5.9752E+02			
-			-					
2.6755E+01	1.2165E+02	3.8123E+06	8.0759E+04	1.7161E+05	3.9554E+01			
-			-					
2.6755E+01	6.0827E+01	8.9596E+06	8.0759E+04	1.6475E+05	1.7057E+02			
-			-					
2.6755E+01	0.0000E+00	2.1184E+07	8.0759E+04	1.5789E+05	7.3116E+02			
-			-					
9.9789E+01	2.2506E+03	1.3443E+00	8.0759E+04	1.5102E+05	7.8320E+02			
-			-					
9.9789E+01	2.1898E+03	8.9167E-02	8.0759E+04	1.4416E+05	3.5329E+03			
-			-					
9.9789E+01	1.9465E+03	4.1250E+00	8.0759E+04	1.3729E+05	2.2476E+03			
-			-					
9.9789E+01	1.8248E+03	1.7946E+00	8.0759E+04	1.3043E+05	3.6828E+03			
-			-					
9.9789E+01	1.7640E+03	4.4583E-02	8.0759E+04	1.2356E+05	4.2468E+03			
-			-					
9.9789E+01	1.7031E+03	5.2946E+00	8.0759E+04	1.1670E+05	8.2865E+03			
-			-					
9.9789E+01	1.6423E+03	4.4583E-02	8.0759E+04	1.0983E+05	1.9616E+04			
-			-					
9.9789E+01	1.5815E+03	1.3233E+01	8.0759E+04	1.0297E+05	2.6907E+04			
-			-					
9.9789E+01	1.5207E+03	1.3134E+01	8.0759E+04	9.6104E+04	3.4528E+04			
-			-					
9.9789E+01	1.4598E+03	7.8925E+00	8.0759E+04	8.9240E+04	8.1875E+04			
-			-					
9.9789E+01	1.3990E+03	1.4089E+01	8.0759E+04	8.2375E+04	9.1492E+04			
-			-					
9.9789E+01	1.3382E+03	1.2997E+01	8.0759E+04	7.5511E+04	1.7406E+05			
-			-					
9.9789E+01	1.2774E+03	4.9389E+01	8.0759E+04	6.8646E+04	1.8657E+05			



DNV Denmark A/S
Tuborg Parkvej 8, 2.
DK-2900 Hellerup
VAT No. DK9832314

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
9.9789E+01	1.2165E+03	1.7853E+01	8.0759E+04	6.1781E+04	3.2731E+05			
-			-					
9.9789E+01	1.1557E+03	1.3278E+01	8.0759E+04	5.4917E+04	4.3786E+05			
-			-					
9.9789E+01	1.0949E+03	5.2048E+01	8.0759E+04	4.8052E+04	5.8456E+05			
-			-					
9.9789E+01	1.0341E+03	3.3901E+01	8.0759E+04	4.1188E+04	7.1576E+05			
-			-					
9.9789E+01	9.7323E+02	4.2246E+01	8.0759E+04	3.4323E+04	1.0432E+06			
-			-					
9.9789E+01	9.1240E+02	1.0243E+02	8.0759E+04	2.7458E+04	1.7823E+06			
-			-					
9.9789E+01	8.5157E+02	1.1538E+02	8.0759E+04	2.0594E+04	3.3706E+06			
-			-					
9.9789E+01	7.9075E+02	1.1021E+02	8.0759E+04	1.3729E+04	4.4501E+06			
-			-					
9.9789E+01	7.2992E+02	1.4214E+02	8.0759E+04	6.8646E+03	5.2620E+06			
-			-					
9.9789E+01	6.6909E+02	1.3191E+02	8.0759E+04	0.0000E+00	1.5606E+07			
-			-					
9.9789E+01	6.0827E+02	2.0413E+02	8.8652E+04	2.0594E+05	5.2170E+01			
-			-					
9.9789E+01	5.4744E+02	2.8036E+02	8.8652E+04	1.9907E+05	4.7773E+00			
-			-					
9.9789E+01	4.8661E+02	2.2905E+03	8.8652E+04	1.9221E+05	2.2684E+02			
-			-					
9.9789E+01	4.2579E+02	7.4287E+03	8.8652E+04	1.8534E+05	5.2170E+01			
-			-					
9.9789E+01	3.6496E+02	2.4716E+03	8.8652E+04	1.7848E+05	5.6947E+01			
-			-					
9.9789E+01	3.0413E+02	9.2714E+03	8.8652E+04	1.7161E+05	2.2428E+03			
-			-					
9.9789E+01	2.4331E+02	9.9861E+03	8.8652E+04	1.6475E+05	1.4809E+02			
-			-					
9.9789E+01	1.8248E+02	3.6194E+04	8.8652E+04	1.5789E+05	1.1206E+03			
-			-					
9.9789E+01	1.2165E+02	2.7098E+05	8.8652E+04	1.5102E+05	1.7868E+03			
-			-					
9.9789E+01	6.0827E+01	6.2162E+05	8.8652E+04	1.4416E+05	3.9883E+03			
-			-					
9.9789E+01	0.0000E+00	2.0767E+06	8.8652E+04	1.3729E+05	5.9756E+03			
-			-					
1.7282E+02	2.7372E+03	4.4583E-02	8.8652E+04	1.3043E+05	5.5884E+03			
-			-					
1.7282E+02	2.0073E+03	3.5000E+00	8.8652E+04	1.2356E+05	1.0928E+04			
-			-					
1.7282E+02	1.8856E+03	1.7500E+00	8.8652E+04	1.1670E+05	1.7489E+04			
-			-					
1.7282E+02	1.7640E+03	5.2500E+00	8.8652E+04	1.0983E+05	3.2718E+04			
-			-					
1.7282E+02	1.7031E+03	8.7500E+00	8.8652E+04	1.0297E+05	6.0978E+04			
-			-					
1.7282E+02	1.6423E+03	3.0943E+00	8.8652E+04	9.6104E+04	7.8606E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
1.7282E+02	1.5815E+03	2.3750E+00	8.8652E+04	8.9240E+04	1.1623E+05			
-			-					
1.7282E+02	1.5207E+03	7.9833E+00	8.8652E+04	8.2375E+04	1.4973E+05			
-			-					
1.7282E+02	1.4598E+03	1.1344E+01	8.8652E+04	7.5511E+04	2.7150E+05			
-			-					
1.7282E+02	1.3990E+03	1.0314E+01	8.8652E+04	6.8646E+04	3.9167E+05			
-			-					
1.7282E+02	1.3382E+03	1.0094E+01	8.8652E+04	6.1781E+04	5.4078E+05			
-			-					
1.7282E+02	1.2774E+03	2.3594E+01	8.8652E+04	5.4917E+04	8.3689E+05			
-			-					
1.7282E+02	1.2165E+03	1.6816E+01	8.8652E+04	4.8052E+04	1.1712E+06			
-			-					
1.7282E+02	1.1557E+03	2.5122E+01	8.8652E+04	4.1188E+04	1.5247E+06			
-			-					
1.7282E+02	1.0949E+03	6.6085E+01	8.8652E+04	3.4323E+04	2.0042E+06			
-			-					
1.7282E+02	1.0341E+03	3.1806E+01	8.8652E+04	2.7458E+04	2.5450E+06			
-			-					
1.7282E+02	9.7323E+02	3.6182E+01	8.8652E+04	2.0594E+04	3.3188E+06			
-			-					
1.7282E+02	9.1240E+02	3.4532E+01	8.8652E+04	1.3729E+04	3.4382E+06			
-			-					
1.7282E+02	8.5157E+02	4.2255E+01	8.8652E+04	6.8646E+03	4.3756E+06			
-			-					
1.7282E+02	7.9075E+02	6.5094E+01	8.8652E+04	0.0000E+00	1.2780E+07			
-			-					
1.7282E+02	7.2992E+02	6.2038E+01	9.6544E+04	2.1967E+05	4.7773E+00			
-			-					
1.7282E+02	6.6909E+02	2.7834E+01	9.6544E+04	1.9907E+05	5.6000E+02			
-			-					
1.7282E+02	6.0827E+02	1.0607E+02	9.6544E+04	1.8534E+05	1.4545E+03			
-			-					
1.7282E+02	5.4744E+02	6.9124E+01	9.6544E+04	1.7848E+05	1.4659E+02			
-			-					
1.7282E+02	4.8661E+02	1.3721E+02	9.6544E+04	1.7161E+05	6.2076E+02			
-			-					
1.7282E+02	4.2579E+02	1.1131E+02	9.6544E+04	1.6475E+05	2.6237E+03			
-			-					
1.7282E+02	3.6496E+02	1.9305E+02	9.6544E+04	1.5789E+05	2.2494E+03			
-			-					
1.7282E+02	3.0413E+02	3.5871E+03	9.6544E+04	1.5102E+05	1.3753E+03			
-			-					
1.7282E+02	2.4331E+02	3.4354E+02	9.6544E+04	1.4416E+05	5.3745E+03			
-			-					
1.7282E+02	1.8248E+02	4.5396E+04	9.6544E+04	1.3729E+05	7.4097E+03			
-			-					
1.7282E+02	1.2165E+02	1.0062E+05	9.6544E+04	1.3043E+05	7.7158E+03			
-			-					
1.7282E+02	6.0827E+01	1.2694E+05	9.6544E+04	1.2356E+05	1.5630E+04			
-			-					
1.7282E+02	0.0000E+00	3.9652E+05	9.6544E+04	1.1670E+05	2.1296E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.4586E+02	2.6155E+03	4.4583E-02	9.6544E+04	1.0983E+05	4.1717E+04			
-			-					
2.4586E+02	2.0073E+03	1.7500E+00	9.6544E+04	1.0297E+05	5.2062E+04			
-			-					
2.4586E+02	1.9465E+03	2.3750E+00	9.6544E+04	9.6104E+04	1.1612E+05			
-			-					
2.4586E+02	1.8856E+03	3.0943E+00	9.6544E+04	8.9240E+04	1.7818E+05			
-			-					
2.4586E+02	1.7640E+03	1.7500E+00	9.6544E+04	8.2375E+04	2.8690E+05			
-			-					
2.4586E+02	1.7031E+03	1.7500E+00	9.6544E+04	7.5511E+04	3.9881E+05			
-			-					
2.4586E+02	1.6423E+03	3.5000E+00	9.6544E+04	6.8646E+04	6.1668E+05			
-			-					
2.4586E+02	1.5815E+03	3.0943E+00	9.6544E+04	6.1781E+04	8.4966E+05			
-			-					
2.4586E+02	1.5207E+03	6.2333E+00	9.6544E+04	5.4917E+04	1.2348E+06			
-			-					
2.4586E+02	1.4598E+03	1.0094E+01	9.6544E+04	4.8052E+04	1.8187E+06			
-			-					
2.4586E+02	1.3990E+03	1.8658E+01	9.6544E+04	4.1188E+04	2.6609E+06			
-			-					
2.4586E+02	1.3382E+03	1.7500E+00	9.6544E+04	3.4323E+04	3.3124E+06			
-			-					
2.4586E+02	1.2774E+03	8.7500E+00	9.6544E+04	2.7458E+04	3.8382E+06			
-			-					
2.4586E+02	1.2165E+03	1.7312E+01	9.6544E+04	2.0594E+04	4.0735E+06			
-			-					
2.4586E+02	1.1557E+03	1.4127E+01	9.6544E+04	1.3729E+04	4.0722E+06			
-			-					
2.4586E+02	1.0949E+03	9.2830E+00	9.6544E+04	6.8646E+03	3.6951E+06			
-			-					
2.4586E+02	1.0341E+03	1.5344E+01	9.6544E+04	0.0000E+00	1.0835E+07			
-			-					
2.4586E+02	9.7323E+02	1.0311E+01	1.0444E+05	1.9221E+05	5.6000E+02			
-			-					
2.4586E+02	9.1240E+02	1.8750E+01	1.0444E+05	1.8534E+05	3.3368E+02			
-			-					
2.4586E+02	8.5157E+02	2.1127E+01	1.0444E+05	1.7848E+05	7.9907E+02			
-			-					
2.4586E+02	7.9075E+02	3.3917E+01	1.0444E+05	1.7161E+05	6.8677E+02			
-			-					
2.4586E+02	7.2992E+02	1.9377E+01	1.0444E+05	1.6475E+05	1.5741E+03			
-			-					
2.4586E+02	6.6909E+02	3.4189E+01	1.0444E+05	1.5789E+05	4.7672E+03			
-			-					
2.4586E+02	6.0827E+02	3.5789E+01	1.0444E+05	1.5102E+05	3.5485E+03			
-			-					
2.4586E+02	5.4744E+02	4.4933E+01	1.0444E+05	1.4416E+05	3.4775E+03			
-			-					
2.4586E+02	4.8661E+02	3.3423E+01	1.0444E+05	1.3729E+05	1.5768E+04			
-			-					
2.4586E+02	4.2579E+02	3.2999E+01	1.0444E+05	1.3043E+05	1.6338E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.4586E+02	3.6496E+02	2.1244E+01	1.0444E+05	1.2356E+05	2.2408E+04			
-			-					
2.4586E+02	3.0413E+02	1.6234E+01	1.0444E+05	1.1670E+05	3.0804E+04			
-			-					
2.4586E+02	2.4331E+02	1.3694E+02	1.0444E+05	1.0983E+05	4.4535E+04			
-			-					
2.4586E+02	1.8248E+02	1.0402E+04	1.0444E+05	1.0297E+05	8.7574E+04			
-			-					
2.4586E+02	1.2165E+02	1.0610E+04	1.0444E+05	9.6104E+04	1.1658E+05			
-			-					
2.4586E+02	6.0827E+01	4.1765E+04	1.0444E+05	8.9240E+04	1.8246E+05			
-			-					
2.4586E+02	0.0000E+00	1.8070E+05	1.0444E+05	8.2375E+04	3.0248E+05			
-			-					
3.1889E+02	2.2506E+03	1.7500E+00	1.0444E+05	7.5511E+04	4.4988E+05			
-			-					
3.1889E+02	1.8248E+03	5.2500E+00	1.0444E+05	6.8646E+04	5.6835E+05			
-			-					
3.1889E+02	1.7640E+03	5.2500E+00	1.0444E+05	6.1781E+04	1.0717E+06			
-			-					
3.1889E+02	1.6423E+03	3.0943E+00	1.0444E+05	5.4917E+04	1.6127E+06			
-			-					
3.1889E+02	1.5815E+03	4.8443E+00	1.0444E+05	4.8052E+04	2.1807E+06			
-			-					
3.1889E+02	1.5207E+03	2.6887E+00	1.0444E+05	4.1188E+04	2.9618E+06			
-			-					
3.1889E+02	1.4598E+03	9.1887E+00	1.0444E+05	3.4323E+04	4.1365E+06			
-			-					
3.1889E+02	1.3382E+03	2.6887E+00	1.0444E+05	2.7458E+04	5.3046E+06			
-			-					
3.1889E+02	1.2774E+03	2.6887E+00	1.0444E+05	2.0594E+04	5.0290E+06			
-			-					
3.1889E+02	1.2165E+03	1.0627E+01	1.0444E+05	1.3729E+04	4.5641E+06			
-			-					
3.1889E+02	1.1557E+03	4.4387E+00	1.0444E+05	6.8646E+03	4.1169E+06			
-			-					
3.1889E+02	1.0949E+03	3.0943E+00	1.0444E+05	0.0000E+00	1.1191E+07			
-			-					
3.1889E+02	1.0341E+03	1.7500E+01	1.1233E+05	1.9221E+05	1.3068E+02			
-			-					
3.1889E+02	9.7323E+02	7.0000E+00	1.1233E+05	1.8534E+05	4.7773E+00			
-			-					
3.1889E+02	9.1240E+02	7.0000E+00	1.1233E+05	1.7848E+05	5.6000E+02			
-			-					
3.1889E+02	8.5157E+02	1.6778E+01	1.1233E+05	1.7161E+05	2.0710E+02			
-			-					
3.1889E+02	7.9075E+02	2.5572E+01	1.1233E+05	1.6475E+05	2.3430E+03			
-			-					
3.1889E+02	7.2992E+02	3.5000E+00	1.1233E+05	1.5789E+05	1.9884E+03			
-			-					
3.1889E+02	6.6909E+02	2.1344E+01	1.1233E+05	1.5102E+05	6.1397E+03			
-			-					
3.1889E+02	6.0827E+02	3.0950E+01	1.1233E+05	1.4416E+05	1.4983E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.1889E+02	5.4744E+02	1.0127E+01	1.1233E+05	1.3729E+05	1.3482E+04			
-			-					
3.1889E+02	4.8661E+02	3.1844E+01	1.1233E+05	1.3043E+05	2.8123E+04			
-			-					
3.1889E+02	4.2579E+02	5.9802E+01	1.1233E+05	1.2356E+05	2.7548E+04			
-			-					
3.1889E+02	3.6496E+02	3.9827E+01	1.1233E+05	1.1670E+05	4.3724E+04			
-			-					
3.1889E+02	3.0413E+02	1.8372E+01	1.1233E+05	1.0983E+05	7.9947E+04			
-			-					
3.1889E+02	2.4331E+02	2.1611E+01	1.1233E+05	1.0297E+05	8.3881E+04			
-			-					
3.1889E+02	1.8248E+02	4.6237E+01	1.1233E+05	9.6104E+04	1.4212E+05			
-			-					
3.1889E+02	1.2165E+02	7.5871E+01	1.1233E+05	8.9240E+04	2.1445E+05			
-			-					
3.1889E+02	6.0827E+01	1.7824E+02	1.1233E+05	8.2375E+04	3.7054E+05			
-			-					
3.1889E+02	0.0000E+00	9.4160E+04	1.1233E+05	7.5511E+04	5.5474E+05			
-			-					
3.9192E+02	1.8856E+03	1.7500E+00	1.1233E+05	6.8646E+04	7.5446E+05			
-			-					
3.9192E+02	1.5815E+03	2.6887E+00	1.1233E+05	6.1781E+04	1.2638E+06			
-			-					
3.9192E+02	1.5207E+03	1.3443E+00	1.1233E+05	5.4917E+04	1.9300E+06			
-			-					
3.9192E+02	1.4598E+03	1.7500E+00	1.1233E+05	4.8052E+04	2.9302E+06			
-			-					
3.9192E+02	1.3990E+03	6.5000E+00	1.1233E+05	4.1188E+04	3.8241E+06			
-			-					
3.9192E+02	1.2774E+03	3.5000E+00	1.1233E+05	3.4323E+04	4.8148E+06			
-			-					
3.9192E+02	1.1557E+03	2.6887E+00	1.1233E+05	2.7458E+04	5.3159E+06			
-			-					
3.9192E+02	1.0341E+03	9.6887E+00	1.1233E+05	2.0594E+04	5.5616E+06			
-			-					
3.9192E+02	9.7323E+02	6.1887E+00	1.1233E+05	1.3729E+04	4.7724E+06			
-			-					
3.9192E+02	9.1240E+02	6.1887E+00	1.1233E+05	6.8646E+03	3.9116E+06			
-			-					
3.9192E+02	8.5157E+02	6.3670E+00	1.1233E+05	0.0000E+00	1.1737E+07			
-			-					
3.9192E+02	7.9075E+02	1.0500E+01	1.2022E+05	2.1280E+05	2.7993E+01			
-			-					
3.9192E+02	7.2992E+02	7.0000E+00	1.2022E+05	1.7161E+05	1.1200E+03			
-			-					
3.9192E+02	6.6909E+02	1.4000E+01	1.2022E+05	1.6475E+05	2.7993E+01			
-			-					
3.9192E+02	6.0827E+02	8.0661E+00	1.2022E+05	1.5789E+05	4.0444E+03			
-			-					
3.9192E+02	5.4744E+02	8.1553E+00	1.2022E+05	1.5102E+05	1.5019E+03			
-			-					
3.9192E+02	4.8661E+02	2.0533E+01	1.2022E+05	1.4416E+05	9.6836E+03			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.9192E+02	4.2579E+02	2.7779E+00	1.2022E+05	1.3729E+05	7.4378E+03			
-			-					
3.9192E+02	3.6496E+02	3.0654E+01	1.2022E+05	1.3043E+05	2.1280E+04			
-			-					
3.9192E+02	3.0413E+02	2.5821E+01	1.2022E+05	1.2356E+05	4.3317E+04			
-			-					
3.9192E+02	2.4331E+02	3.6576E+01	1.2022E+05	1.1670E+05	3.9290E+04			
-			-					
3.9192E+02	1.8248E+02	2.4650E+01	1.2022E+05	1.0983E+05	7.5830E+04			
-			-					
3.9192E+02	1.2165E+02	1.0913E+02	1.2022E+05	1.0297E+05	1.1873E+05			
-			-					
3.9192E+02	6.0827E+01	1.4012E+02	1.2022E+05	9.6104E+04	2.1315E+05			
-			-					
3.9192E+02	0.0000E+00	1.7536E+03	1.2022E+05	8.9240E+04	2.4299E+05			
-			-					
4.6496E+02	1.7640E+03	3.0943E+00	1.2022E+05	8.2375E+04	3.4982E+05			
-			-					
4.6496E+02	1.4598E+03	1.3443E+00	1.2022E+05	7.5511E+04	5.1034E+05			
-			-					
4.6496E+02	1.0341E+03	1.7417E+01	1.2022E+05	6.8646E+04	8.3920E+05			
-			-					
4.6496E+02	9.1240E+02	2.6887E+00	1.2022E+05	6.1781E+04	1.4306E+06			
-			-					
4.6496E+02	8.5157E+02	2.4334E+01	1.2022E+05	5.4917E+04	1.7455E+06			
-			-					
4.6496E+02	7.9075E+02	3.5000E+00	1.2022E+05	4.8052E+04	2.9507E+06			
-			-					
4.6496E+02	7.2992E+02	1.0500E+01	1.2022E+05	4.1188E+04	3.8721E+06			
-			-					
4.6496E+02	6.6909E+02	1.2377E+01	1.2022E+05	3.4323E+04	4.7693E+06			
-			-					
4.6496E+02	6.0827E+02	2.0106E+01	1.2022E+05	2.7458E+04	5.9255E+06			
-			-					
4.6496E+02	5.4744E+02	1.0755E+01	1.2022E+05	2.0594E+04	5.8858E+06			
-			-					
4.6496E+02	4.8661E+02	1.4000E+01	1.2022E+05	1.3729E+04	5.1359E+06			
-			-					
4.6496E+02	4.2579E+02	9.6887E+00	1.2022E+05	6.8646E+03	3.9986E+06			
-			-					
4.6496E+02	3.6496E+02	8.8774E+00	1.2022E+05	0.0000E+00	1.2942E+07			
-			-					
4.6496E+02	3.0413E+02	2.9238E+01	1.2812E+05	1.9221E+05	2.7993E+01			
-			-					
4.6496E+02	2.4331E+02	5.3774E+00	1.2812E+05	1.6475E+05	3.9204E+02			
-			-					
4.6496E+02	1.8248E+02	4.3582E+01	1.2812E+05	1.5789E+05	1.2188E+03			
-			-					
4.6496E+02	1.2165E+02	8.4610E+01	1.2812E+05	1.5102E+05	1.0203E+03			
-			-					
4.6496E+02	6.0827E+01	1.2734E+02	1.2812E+05	1.4416E+05	3.1504E+03			
-			-					
4.6496E+02	0.0000E+00	1.9750E+02	1.2812E+05	1.3729E+05	7.4592E+03			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
5.3799E+02	1.0341E+03	3.5000E+00	1.2812E+05	1.3043E+05	1.0957E+04			
-			-					
5.3799E+02	6.6909E+02	4.7500E+00	1.2812E+05	1.2356E+05	2.0418E+04			
-			-					
5.3799E+02	5.4744E+02	8.9167E-02	1.2812E+05	1.1670E+05	4.8420E+04			
-			-					
5.3799E+02	4.8661E+02	8.0661E+00	1.2812E+05	1.0983E+05	4.8519E+04			
-			-					
5.3799E+02	3.6496E+02	1.0755E+01	1.2812E+05	1.0297E+05	9.5896E+04			
-			-					
5.3799E+02	3.0413E+02	2.2321E+01	1.2812E+05	9.6104E+04	1.7285E+05			
-			-					
5.3799E+02	2.4331E+02	1.4344E+01	1.2812E+05	8.9240E+04	2.5243E+05			
-			-					
5.3799E+02	1.8248E+02	1.7033E+01	1.2812E+05	8.2375E+04	3.9824E+05			
-			-					
5.3799E+02	1.2165E+02	1.6221E+01	1.2812E+05	7.5511E+04	7.3805E+05			
-			-					
5.3799E+02	6.0827E+01	5.9764E+01	1.2812E+05	6.8646E+04	9.4560E+05			
-			-					
5.3799E+02	0.0000E+00	7.8919E+01	1.2812E+05	6.1781E+04	1.3596E+06			
-			-					
6.1102E+02	1.3990E+03	3.5000E+00	1.2812E+05	5.4917E+04	2.3617E+06			
-			-					
6.1102E+02	6.6909E+02	2.6887E+00	1.2812E+05	4.8052E+04	3.1951E+06			
-			-					
6.1102E+02	6.0827E+02	5.3774E+00	1.2812E+05	4.1188E+04	4.4697E+06			
-			-					
6.1102E+02	5.4744E+02	2.6887E+00	1.2812E+05	3.4323E+04	5.5247E+06			
-			-					
6.1102E+02	4.8661E+02	5.3774E+00	1.2812E+05	2.7458E+04	6.1708E+06			
-			-					
6.1102E+02	4.2579E+02	3.5892E+00	1.2812E+05	2.0594E+04	6.1101E+06			
-			-					
6.1102E+02	3.6496E+02	2.6887E+00	1.2812E+05	1.3729E+04	5.1331E+06			
-			-					
6.1102E+02	3.0413E+02	5.3774E+00	1.2812E+05	6.8646E+03	4.3550E+06			
-			-					
6.1102E+02	2.4331E+02	1.6132E+01	1.2812E+05	0.0000E+00	1.2742E+07			
-			-					
6.1102E+02	1.8248E+02	8.1553E+00	1.3601E+05	1.5102E+05	9.8780E+01			
-			-					
6.1102E+02	1.2165E+02	2.3861E+01	1.3601E+05	1.4416E+05	9.8780E+01			
-			-					
6.1102E+02	6.0827E+01	4.0438E+01	1.3601E+05	1.3729E+05	1.4440E+03			
-			-					
6.1102E+02	0.0000E+00	6.7386E+01	1.3601E+05	1.3043E+05	2.2946E+02			
-			-					
6.8406E+02	7.9075E+02	2.6887E+00	1.3601E+05	1.2356E+05	4.7922E+03			
-			-					
6.8406E+02	4.2579E+02	2.6887E+00	1.3601E+05	1.1670E+05	1.6633E+04			
-			-					
6.8406E+02	3.6496E+02	5.3774E+00	1.3601E+05	1.0983E+05	4.1718E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
6.8406E+02	3.0413E+02	2.6887E+00	1.3601E+05	1.0297E+05	5.7485E+04			
-			-					
6.8406E+02	2.4331E+02	5.3774E+00	1.3601E+05	9.6104E+04	8.4309E+04			
-			-					
6.8406E+02	1.8248E+02	2.6887E+00	1.3601E+05	8.9240E+04	1.3360E+05			
-			-					
6.8406E+02	1.2165E+02	1.7033E+01	1.3601E+05	8.2375E+04	2.2008E+05			
-			-					
6.8406E+02	6.0827E+01	4.4234E+01	1.3601E+05	7.5511E+04	4.5354E+05			
-			-					
6.8406E+02	0.0000E+00	3.3377E+01	1.3601E+05	6.8646E+04	7.7792E+05			
-			-					
7.5709E+02	5.4744E+02	2.6887E+00	1.3601E+05	6.1781E+04	1.3562E+06			
-			-					
7.5709E+02	3.0413E+02	8.0661E+00	1.3601E+05	5.4917E+04	1.9934E+06			
-			-					
7.5709E+02	2.4331E+02	5.3774E+00	1.3601E+05	4.8052E+04	3.1984E+06			
-			-					
7.5709E+02	1.2165E+02	8.8774E+00	1.3601E+05	4.1188E+04	4.3848E+06			
-			-					
7.5709E+02	6.0827E+01	8.8774E+00	1.3601E+05	3.4323E+04	5.3356E+06			
-			-					
7.5709E+02	0.0000E+00	2.0806E+01	1.3601E+05	2.7458E+04	6.2056E+06			
-			-					
8.3012E+02	4.8661E+02	5.3774E+00	1.3601E+05	2.0594E+04	6.6275E+06			
-			-					
8.3012E+02	3.6496E+02	5.3774E+00	1.3601E+05	1.3729E+04	5.0752E+06			
-			-					
8.3012E+02	3.0413E+02	5.3774E+00	1.3601E+05	6.8646E+03	4.4671E+06			
-			-					
8.3012E+02	1.8248E+02	5.3774E+00	1.3601E+05	0.0000E+00	1.2296E+07			
-			-					
8.3012E+02	1.2165E+02	5.3774E+00	1.4390E+05	1.3729E+05	9.8780E+01			
-			-					
8.3012E+02	6.0827E+01	1.1566E+01	1.4390E+05	1.3043E+05	1.3443E+00			
-			-					
8.3012E+02	0.0000E+00	1.3278E+01	1.4390E+05	1.1670E+05	1.0787E+03			
-			-					
9.0316E+02	3.6496E+02	2.6887E+00	1.4390E+05	1.0983E+05	4.1727E+03			
-			-					
9.0316E+02	6.0827E+01	5.4666E+00	1.4390E+05	1.0297E+05	3.1085E+03			
-			-					
9.0316E+02	0.0000E+00	8.0661E+00	1.4390E+05	9.6104E+04	1.8411E+04			
-			-					
9.7619E+02	3.6496E+02	5.3774E+00	1.4390E+05	8.9240E+04	2.2708E+04			
-			-					
9.7619E+02	3.0413E+02	2.6887E+00	1.4390E+05	8.2375E+04	4.9082E+04			
-			-					
9.7619E+02	1.8248E+02	5.3774E+00	1.4390E+05	7.5511E+04	8.2072E+04			
-			-					
9.7619E+02	6.0827E+01	1.1655E+01	1.4390E+05	6.8646E+04	2.3488E+05			
-			-					
9.7619E+02	0.0000E+00	2.6887E+00	1.4390E+05	6.1781E+04	4.4760E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
- 1.1223E+03	2.4331E+02	2.6887E+00	- 1.4390E+05	5.4917E+04	8.1152E+05			
- 1.1223E+03	1.2165E+02	2.6887E+00	- 1.4390E+05	4.8052E+04	1.2164E+06			
			- 1.4390E+05	4.1188E+04	2.0378E+06			
			- 1.4390E+05	3.4323E+04	2.8043E+06			
			- 1.4390E+05	2.7458E+04	3.5497E+06			
			- 1.4390E+05	2.0594E+04	3.6790E+06			
			- 1.4390E+05	1.3729E+04	3.4971E+06			
			- 1.4390E+05	6.8646E+03	2.9870E+06			
			- 1.4390E+05	0.0000E+00	8.7123E+06			
			- 1.5179E+05	8.9240E+04	3.9512E+02			
			- 1.5179E+05	8.2375E+04	2.7580E+03			
			- 1.5179E+05	7.5511E+04	1.4874E+04			
			- 1.5179E+05	6.8646E+04	5.4275E+04			
			- 1.5179E+05	6.1781E+04	6.5441E+04			
			- 1.5179E+05	5.4917E+04	1.5569E+05			
			- 1.5179E+05	4.8052E+04	3.2093E+05			
			- 1.5179E+05	4.1188E+04	4.8645E+05			
			- 1.5179E+05	3.4323E+04	8.0183E+05			
			- 1.5179E+05	2.7458E+04	1.1048E+06			
			- 1.5179E+05	2.0594E+04	1.0855E+06			
			- 1.5179E+05	1.3729E+04	9.6737E+05			
			- 1.5179E+05	6.8646E+03	1.0340E+06			
			- 1.5179E+05	0.0000E+00	3.7557E+06			
			- 1.5969E+05	6.8646E+04	6.1406E+02			
			- 1.5969E+05	6.1781E+04	1.4266E+03			
			- 1.5969E+05	5.4917E+04	3.0417E+04			
			- 1.5969E+05	4.8052E+04	3.1111E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			- 1.5969E+05	4.1188E+04	6.2282E+04			
			- 1.5969E+05	3.4323E+04	5.3873E+04			
			- 1.5969E+05	2.7458E+04	1.0886E+05			
			- 1.5969E+05	2.0594E+04	1.0752E+05			
			- 1.5969E+05	1.3729E+04	1.8547E+05			
			- 1.5969E+05	6.8646E+03	1.6301E+05			
			- 1.5969E+05	0.0000E+00	1.0050E+06			
			- 1.6758E+05	1.0297E+05	5.5986E+01			
			- 1.6758E+05	4.8052E+04	2.6887E+00			
			- 1.6758E+05	3.4323E+04	1.1098E+04			
			- 1.6758E+05	2.7458E+04	5.5529E+03			
			- 1.6758E+05	2.0594E+04	3.1722E+03			
			- 1.6758E+05	1.3729E+04	1.1098E+04			
			- 1.6758E+05	6.8646E+03	5.6608E+03			
			- 1.6758E+05	0.0000E+00	1.1966E+05			
			- 1.7547E+05	1.3729E+04	2.6887E+00			
			- 1.7547E+05	0.0000E+00	1.3880E+04			
			- 1.8336E+05	0.0000E+00	5.3774E+00			

Table 5-11 [1] Markov Matrix

Appendix D. Markov matrices – issued from [2]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [2]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.6675E+03	0.0000E+00	9.5547E+00	1.6094E+05	6.8069E+03	8.0661E+00	9.4119E+03	0.0000E+00	2.6887E+00
1.5948E+03	0.0000E+00	2.2400E+03	1.6094E+05	0.0000E+00	2.6887E+00	8.7829E+03	0.0000E+00	3.5000E+00
1.5221E+03	6.3680E+01	2.8541E+03	1.5307E+05	1.3614E+04	2.6887E+00	7.5250E+03	4.7655E+02	1.0434E+02
1.5221E+03	0.0000E+00	7.2991E+02	1.5307E+05	6.8069E+03	2.6887E+00	7.5250E+03	0.0000E+00	1.2646E+01
1.4494E+03	1.9104E+02	1.1200E+03	1.5307E+05	0.0000E+00	5.3774E+00	6.8960E+03	1.9062E+03	2.6887E+00
1.4494E+03	6.3680E+01	4.0765E+02	1.4520E+05	0.0000E+00	2.6887E+00	6.8960E+03	1.4296E+03	3.5000E+00
1.4494E+03	0.0000E+00	1.2365E+04	1.3734E+05	6.8069E+03	5.3774E+00	6.8960E+03	4.7655E+02	6.7896E+00
1.3768E+03	2.5472E+02	1.3068E+02	1.3734E+05	0.0000E+00	2.6887E+00	6.8960E+03	0.0000E+00	3.8487E+01
1.3768E+03	1.9104E+02	1.3443E+00	1.2947E+05	6.8069E+03	5.3774E+00	6.2671E+03	5.2420E+03	2.6887E+00
1.3768E+03	6.3680E+01	1.5007E+03	1.2947E+05	0.0000E+00	5.3774E+00	6.2671E+03	4.7655E+03	2.6887E+00
1.3768E+03	0.0000E+00	6.5261E+04	1.2161E+05	1.3614E+04	2.6887E+00	6.2671E+03	3.3358E+03	3.5000E+00
1.3041E+03	1.9104E+02	1.3443E+00	1.2161E+05	6.8069E+03	1.0755E+01	6.2671E+03	9.5310E+02	1.0046E+01
1.3041E+03	1.2736E+02	1.9756E+02	1.2161E+05	0.0000E+00	1.6132E+01	6.2671E+03	4.7655E+02	2.5790E+01
1.3041E+03	6.3680E+01	3.8362E+04	1.1374E+05	2.7228E+04	2.6887E+00	6.2671E+03	0.0000E+00	7.0543E+02
1.3041E+03	0.0000E+00	1.7457E+05	1.1374E+05	6.8069E+03	8.0661E+00	5.6381E+03	8.5779E+03	3.5000E+00
1.2314E+03	3.1840E+02	1.3443E+00	1.1374E+05	0.0000E+00	1.3444E+01	5.6381E+03	7.1482E+03	2.6887E+00
1.2314E+03	2.5472E+02	2.7807E+03	1.0588E+05	1.3614E+04	2.6887E+00	5.6381E+03	3.8124E+03	1.6146E+01
1.2314E+03	1.2736E+02	5.1380E+03	1.0588E+05	6.8069E+03	1.0755E+01	5.6381E+03	3.3358E+03	1.0500E+01
1.2314E+03	6.3680E+01	9.8272E+04	1.0588E+05	0.0000E+00	1.0755E+01	5.6381E+03	2.8593E+03	2.6887E+00
1.2314E+03	0.0000E+00	5.4613E+05	9.8011E+04	3.4035E+04	3.5000E+00	5.6381E+03	2.3827E+03	8.9167E-02
1.1587E+03	5.0944E+02	9.9571E+00	9.8011E+04	2.0421E+04	8.0661E+00	5.6381E+03	1.9062E+03	3.5000E+00
1.1587E+03	3.8208E+02	1.7500E+00	9.8011E+04	6.8069E+03	2.6887E+00	5.6381E+03	1.4296E+03	2.3146E+01
1.1587E+03	3.1840E+02	1.7500E+00	9.8011E+04	0.0000E+00	2.1510E+01	5.6381E+03	9.5310E+02	4.0824E+02
1.1587E+03	2.5472E+02	5.6521E+02	9.0145E+04	8.8490E+04	3.5000E+00	5.6381E+03	4.7655E+02	9.9927E+03
1.1587E+03	1.9104E+02	1.5817E+03	9.0145E+04	5.4455E+04	3.5000E+00	5.6381E+03	0.0000E+00	1.6064E+04
1.1587E+03	1.2736E+02	1.9016E+04	9.0145E+04	4.7648E+04	3.5000E+00	5.0091E+03	1.0008E+04	8.9167E-02
1.1587E+03	6.3680E+01	2.5916E+05	9.0145E+04	2.7228E+04	3.5000E+00	5.0091E+03	7.1482E+03	3.5000E+00
1.1587E+03	0.0000E+00	1.3857E+06	9.0145E+04	6.8069E+03	2.5821E+01	5.0091E+03	6.6717E+03	2.6887E+00
1.0860E+03	6.3680E+02	2.0382E+01	9.0145E+04	0.0000E+00	4.4304E+01	5.0091E+03	6.1951E+03	3.5000E+00
1.0860E+03	5.7312E+02	1.9905E+02	8.2280E+04	6.1262E+04	3.5000E+00	5.0091E+03	5.2420E+03	3.5000E+00
1.0860E+03	5.0944E+02	2.6887E+00	8.2280E+04	4.0841E+04	7.0000E+00	5.0091E+03	4.7655E+03	2.6887E+00
1.0860E+03	4.4576E+02	7.8972E+00	8.2280E+04	3.4035E+04	9.6887E+00	5.0091E+03	4.2889E+03	3.4679E+00
1.0860E+03	3.8208E+02	4.7773E+00	8.2280E+04	2.7228E+04	9.6887E+00	5.0091E+03	3.3358E+03	2.8571E+00
1.0860E+03	2.5472E+02	1.2566E+03	8.2280E+04	2.0421E+04	1.1566E+01	5.0091E+03	2.8593E+03	3.396E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0860E+03	1.9104E+02	5.5581E+03	8.2280E+04	1.3614E+04	8.9167E-02	5.0091E+03	2.3827E+03	6.2779E+00
1.0860E+03	1.2736E+02	5.4275E+04	8.2280E+04	6.8069E+03	2.9576E+01	5.0091E+03	1.9062E+03	1.1122E+02
1.0860E+03	6.3680E+01	9.1738E+05	8.2280E+04	0.0000E+00	4.6016E+01	5.0091E+03	1.4296E+03	1.7861E+02
1.0860E+03	0.0000E+00	3.0244E+06	7.4414E+04	1.8379E+05	1.3443E+00	5.0091E+03	9.5310E+02	7.9428E+02
1.0134E+03	1.8467E+03	5.5986E+01	7.4414E+04	8.8490E+04	3.5000E+00	5.0091E+03	4.7655E+02	6.2360E+04
1.0134E+03	1.1462E+03	2.2946E+02	7.4414E+04	6.1262E+04	3.5000E+00	5.0091E+03	0.0000E+00	1.6827E+05
1.0134E+03	1.0826E+03	6.1137E+02	7.4414E+04	4.7648E+04	3.5000E+00	4.3802E+03	1.7156E+04	1.3443E+00
1.0134E+03	1.0189E+03	1.9756E+02	7.4414E+04	4.0841E+04	3.5000E+00	4.3802E+03	1.2867E+04	1.7500E+00
1.0134E+03	9.5520E+02	2.1574E+03	7.4414E+04	3.4035E+04	2.7023E+01	4.3802E+03	7.1482E+03	2.6887E+00
1.0134E+03	8.9152E+02	2.6887E+00	7.4414E+04	2.7228E+04	8.8774E+00	4.3802E+03	5.7186E+03	9.4783E+00
1.0134E+03	8.2784E+02	2.1620E+03	7.4414E+04	2.0421E+04	2.9600E+01	4.3802E+03	5.2420E+03	2.6887E+00
1.0134E+03	7.0048E+02	7.8972E+00	7.4414E+04	1.3614E+04	6.1887E+00	4.3802E+03	4.7655E+03	6.0675E+00
1.0134E+03	6.3680E+02	1.2037E+02	7.4414E+04	6.8069E+03	3.4729E+01	4.3802E+03	4.2889E+03	2.3821E+01
1.0134E+03	5.7312E+02	6.9786E+03	7.4414E+04	0.0000E+00	5.7293E+01	4.3802E+03	3.8124E+03	1.3025E+01
1.0134E+03	5.0944E+02	4.8275E+03	6.6549E+04	2.0421E+05	1.3443E+00	4.3802E+03	3.3358E+03	7.5710E+02
1.0134E+03	4.4576E+02	5.8580E+03	6.6549E+04	1.9740E+05	2.6887E+00	4.3802E+03	2.8593E+03	9.5073E+03
1.0134E+03	3.8208E+02	3.2934E+03	6.6549E+04	1.6337E+05	1.3443E+00	4.3802E+03	2.3827E+03	7.2777E+03
1.0134E+03	3.1840E+02	1.4002E+04	6.6549E+04	1.0210E+05	3.5000E+00	4.3802E+03	1.9062E+03	3.2059E+04
1.0134E+03	2.5472E+02	8.4162E+03	6.6549E+04	8.8490E+04	2.6887E+00	4.3802E+03	1.4296E+03	2.6064E+04
1.0134E+03	1.9104E+02	5.2611E+04	6.6549E+04	8.1683E+04	3.5000E+00	4.3802E+03	9.5310E+02	5.8921E+04
1.0134E+03	1.2736E+02	2.8861E+05	6.6549E+04	6.8069E+04	2.6887E+00	4.3802E+03	4.7655E+02	1.8870E+05
1.0134E+03	6.3680E+01	2.5049E+06	6.6549E+04	6.1262E+04	9.6887E+00	4.3802E+03	0.0000E+00	7.4260E+05
1.0134E+03	0.0000E+00	6.8421E+06	6.6549E+04	5.4455E+04	3.5000E+00	3.7512E+03	1.4296E+04	1.7500E+00
9.4069E+02	2.0378E+03	9.8780E+01	6.6549E+04	4.7648E+04	2.7189E+01	3.7512E+03	1.2867E+04	1.3443E+00
9.4069E+02	1.9741E+03	1.3068E+02	6.6549E+04	4.0841E+04	8.9167E-02	3.7512E+03	7.6248E+03	2.6887E+00
9.4069E+02	1.6557E+03	1.6400E+03	6.6549E+04	3.4035E+04	3.5000E+00	3.7512E+03	7.1482E+03	8.9167E-02
9.4069E+02	1.5920E+03	1.6400E+03	6.6549E+04	2.7228E+04	1.5066E+01	3.7512E+03	6.6717E+03	1.4932E+01
9.4069E+02	1.5283E+03	3.9754E+03	6.6549E+04	2.0421E+04	1.2377E+01	3.7512E+03	6.1951E+03	3.5000E+00
9.4069E+02	1.4646E+03	1.9756E+02	6.6549E+04	1.3614E+04	8.0661E+00	3.7512E+03	5.7186E+03	1.4304E+02
9.4069E+02	1.4010E+03	2.7738E+03	6.6549E+04	6.8069E+03	4.8704E+01	3.7512E+03	5.2420E+03	9.3524E+02
9.4069E+02	1.3373E+03	5.2085E+00	6.6549E+04	0.0000E+00	1.0337E+02	3.7512E+03	4.7655E+03	6.5954E+02
9.4069E+02	1.2736E+03	1.4513E+02	5.8683E+04	1.6337E+05	1.3443E+00	3.7512E+03	4.2889E+03	2.2918E+04
9.4069E+02	1.2099E+03	1.3473E+03	5.8683E+04	1.5656E+05	1.3443E+00	3.7512E+03	3.8124E+03	4.4161E+04
9.4069E+02	1.1462E+03	9.7075E+03	5.8683E+04	1.4975E+05	2.6887E+00	3.7512E+03	3.3358E+03	5.9375E+04
9.4069E+02	1.0826E+03	1.9786E+04	5.8683E+04	1.2933E+05	1.7500E+00	3.7512E+03	2.8593E+03	1.1452E+05
9.4069E+02	1.0189E+03	1.8549E+04	5.8683E+04	1.2252E+05	3.5000E+00	3.7512E+03	2.3827E+03	1.3579E+05
9.4069E+02	9.5520E+02	3.9092E+04	5.8683E+04	1.0210E+05	2.6887E+00	3.7512E+03	1.9062E+03	1.5148E+05
9.4069E+02	8.9152E+02	3.1829E+04	5.8683E+04	8.1683E+04	1.2500E+00	3.7512E+03	1.4296E+03	1.4304E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.4069E+02	8.2784E+02	6.6682E+04	5.8683E+04	7.4876E+04	3.5000E+00	3.7512E+03	9.5310E+02	3.2104E+05
9.4069E+02	7.6416E+02	1.0347E+05	5.8683E+04	6.8069E+04	7.4387E+00	3.7512E+03	4.7655E+02	1.0657E+06
9.4069E+02	7.0048E+02	1.2819E+05	5.8683E+04	6.1262E+04	6.1887E+00	3.7512E+03	0.0000E+00	2.2507E+06
9.4069E+02	6.3680E+02	1.9230E+05	5.8683E+04	5.4455E+04	2.7106E+01	3.1223E+03	2.0015E+04	1.3443E+00
9.4069E+02	5.7312E+02	2.5322E+05	5.8683E+04	4.7648E+04	1.0417E+01	3.1223E+03	1.9538E+04	4.4583E-02
9.4069E+02	5.0944E+02	3.0216E+05	5.8683E+04	4.0841E+04	7.0000E+00	3.1223E+03	1.9062E+04	4.4583E-02
9.4069E+02	4.4576E+02	3.3168E+05	5.8683E+04	3.4035E+04	3.5000E+00	3.1223E+03	1.4773E+04	1.3443E+00
9.4069E+02	3.8208E+02	3.2683E+05	5.8683E+04	2.7228E+04	5.4666E+00	3.1223E+03	1.4296E+04	1.7500E+00
9.4069E+02	3.1840E+02	2.8526E+05	5.8683E+04	2.0421E+04	3.3384E+01	3.1223E+03	1.3820E+04	1.7500E+00
9.4069E+02	2.5472E+02	2.2810E+05	5.8683E+04	1.3614E+04	2.2973E+01	3.1223E+03	1.2867E+04	8.9167E-02
9.4069E+02	1.9104E+02	3.1202E+05	5.8683E+04	6.8069E+03	3.6843E+01	3.1223E+03	1.0484E+04	3.0943E+00
9.4069E+02	1.2736E+02	1.1358E+06	5.8683E+04	0.0000E+00	7.8038E+01	3.1223E+03	9.0544E+03	8.9167E-02
9.4069E+02	6.3680E+01	5.8551E+06	5.0818E+04	1.9740E+05	1.3443E+00	3.1223E+03	8.5779E+03	3.5000E+00
9.4069E+02	0.0000E+00	1.2565E+07	5.0818E+04	1.9059E+05	1.3443E+00	3.1223E+03	8.1013E+03	8.9167E-02
8.6801E+02	2.2925E+03	5.6000E+02	5.0818E+04	1.7017E+05	3.5000E+00	3.1223E+03	7.6248E+03	1.3983E+03
8.6801E+02	2.2288E+03	1.5493E+02	5.0818E+04	1.6337E+05	2.6887E+00	3.1223E+03	7.1482E+03	1.1479E+03
8.6801E+02	2.1651E+03	1.5867E+02	5.0818E+04	1.5656E+05	1.3443E+00	3.1223E+03	6.6717E+03	1.0111E+04
8.6801E+02	2.1014E+03	1.3068E+02	5.0818E+04	1.4295E+05	6.1887E+00	3.1223E+03	6.1951E+03	1.0148E+04
8.6801E+02	2.0378E+03	1.2520E+03	5.0818E+04	1.3614E+05	1.7500E+00	3.1223E+03	5.7186E+03	3.0123E+04
8.6801E+02	1.9741E+03	1.8683E+02	5.0818E+04	1.2252E+05	3.5000E+00	3.1223E+03	5.2420E+03	4.2218E+04
8.6801E+02	1.9104E+03	2.8541E+03	5.0818E+04	1.0210E+05	3.5000E+00	3.1223E+03	4.7655E+03	7.1737E+04
8.6801E+02	1.8467E+03	1.6260E+03	5.0818E+04	9.5297E+04	2.6887E+00	3.1223E+03	4.2889E+03	2.0463E+05
8.6801E+02	1.7830E+03	4.0101E+03	5.0818E+04	8.1683E+04	2.6887E+00	3.1223E+03	3.8124E+03	2.9980E+05
8.6801E+02	1.7194E+03	5.4280E+03	5.0818E+04	6.8069E+04	3.5000E+00	3.1223E+03	3.3358E+03	3.1786E+05
8.6801E+02	1.6557E+03	3.9351E+03	5.0818E+04	6.1262E+04	1.5877E+01	3.1223E+03	2.8593E+03	4.7768E+05
8.6801E+02	1.5920E+03	6.3214E+03	5.0818E+04	5.4455E+04	1.3189E+01	3.1223E+03	2.3827E+03	6.6426E+05
8.6801E+02	1.5283E+03	1.7803E+04	5.0818E+04	4.7648E+04	1.1750E+01	3.1223E+03	1.9062E+03	5.4485E+05
8.6801E+02	1.4646E+03	1.8909E+04	5.0818E+04	4.0841E+04	1.4178E+01	3.1223E+03	1.4296E+03	5.5409E+05
8.6801E+02	1.4010E+03	3.4142E+04	5.0818E+04	3.4035E+04	2.2155E+01	3.1223E+03	9.5310E+02	9.0191E+05
8.6801E+02	1.3373E+03	6.9125E+04	5.0818E+04	2.7228E+04	3.0956E+01	3.1223E+03	4.7655E+02	2.0608E+06
8.6801E+02	1.2736E+03	7.3918E+04	5.0818E+04	2.0421E+04	7.1736E+01	3.1223E+03	0.0000E+00	4.8162E+06
8.6801E+02	1.2099E+03	1.2721E+05	5.0818E+04	1.3614E+04	5.6528E+01	2.4933E+03	1.6203E+04	1.3889E+00
8.6801E+02	1.1462E+03	1.9088E+05	5.0818E+04	6.8069E+03	4.7155E+01	2.4933E+03	1.2867E+04	4.8443E+00
8.6801E+02	1.0826E+03	2.2099E+05	5.0818E+04	0.0000E+00	1.6518E+02	2.4933E+03	1.1914E+04	4.4583E-02
8.6801E+02	1.0189E+03	3.1492E+05	4.2952E+04	1.8379E+05	1.7500E+00	2.4933E+03	1.1437E+04	1.3443E+00
8.6801E+02	9.5520E+02	4.9667E+05	4.2952E+04	1.7698E+05	1.3443E+00	2.4933E+03	1.0961E+04	3.0943E+00
8.6801E+02	8.9152E+02	6.4317E+05	4.2952E+04	1.6337E+05	6.5943E+00	2.4933E+03	1.0484E+04	3.6887E+00
8.6801E+02	8.2784E+02	8.2432E+05	4.2952E+04	1.5656E+05	4.0331E+00	2.4933E+03	1.0008E+04	1.9059E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.6801E+02	7.6416E+02	1.0601E+06	4.2952E+04	1.4975E+05	1.3443E+00	2.4933E+03	8.5779E+03	9.7330E+00
8.6801E+02	7.0048E+02	1.3460E+06	4.2952E+04	1.4295E+05	1.0094E+01	2.4933E+03	8.1013E+03	1.5844E+01
8.6801E+02	6.3680E+02	1.6075E+06	4.2952E+04	1.3614E+05	4.0331E+00	2.4933E+03	7.6248E+03	4.6092E+03
8.6801E+02	5.7312E+02	2.3369E+06	4.2952E+04	1.2933E+05	5.2500E+00	2.4933E+03	7.1482E+03	1.6093E+04
8.6801E+02	5.0944E+02	2.3292E+06	4.2952E+04	1.2252E+05	8.3443E+00	2.4933E+03	6.6717E+03	3.9064E+04
8.6801E+02	4.4576E+02	2.5805E+06	4.2952E+04	1.1572E+05	1.3443E+00	2.4933E+03	6.1951E+03	6.1109E+04
8.6801E+02	3.8208E+02	2.7571E+06	4.2952E+04	1.0891E+05	4.0331E+00	2.4933E+03	5.7186E+03	2.2072E+05
8.6801E+02	3.1840E+02	2.7267E+06	4.2952E+04	1.0210E+05	5.2500E+00	2.4933E+03	5.2420E+03	2.5260E+05
8.6801E+02	2.5472E+02	2.3189E+06	4.2952E+04	9.5297E+04	3.5000E+00	2.4933E+03	4.7655E+03	3.7883E+05
8.6801E+02	1.9104E+02	2.0699E+06	4.2952E+04	8.8490E+04	3.5000E+00	2.4933E+03	4.2889E+03	6.0577E+05
8.6801E+02	1.2736E+02	3.5120E+06	4.2952E+04	8.1683E+04	3.5000E+00	2.4933E+03	3.8124E+03	6.9798E+05
8.6801E+02	6.3680E+01	1.1263E+07	4.2952E+04	6.8069E+04	1.4255E+01	2.4933E+03	3.3358E+03	1.0415E+06
8.6801E+02	0.0000E+00	1.9028E+07	4.2952E+04	6.1262E+04	1.3189E+01	2.4933E+03	2.8593E+03	8.5618E+05
7.9533E+02	2.6745E+03	1.3068E+02	4.2952E+04	5.4455E+04	1.0500E+01	2.4933E+03	2.3827E+03	1.0429E+06
7.9533E+02	2.6109E+03	2.6136E+02	4.2952E+04	4.7648E+04	2.9066E+01	2.4933E+03	1.9062E+03	1.0937E+06
7.9533E+02	2.4835E+03	4.7773E+00	4.2952E+04	4.0841E+04	1.9294E+01	2.4933E+03	1.4296E+03	1.2744E+06
7.9533E+02	2.3561E+03	5.9320E+02	4.2952E+04	3.4035E+04	2.8433E+01	2.4933E+03	9.5310E+02	1.9690E+06
7.9533E+02	2.2925E+03	7.9963E+02	4.2952E+04	2.7228E+04	2.9877E+01	2.4933E+03	4.7655E+02	4.6457E+06
7.9533E+02	2.2288E+03	1.2311E+03	4.2952E+04	2.0421E+04	2.1783E+01	2.4933E+03	0.0000E+00	9.2964E+06
7.9533E+02	2.1651E+03	5.3312E+03	4.2952E+04	1.3614E+04	7.1850E+01	1.8643E+03	1.8109E+04	8.9167E-02
7.9533E+02	2.1014E+03	9.0306E+02	4.2952E+04	6.8069E+03	4.9754E+01	1.8643E+03	1.7632E+04	4.4583E-02
7.9533E+02	2.0378E+03	3.4984E+03	4.2952E+04	0.0000E+00	2.0949E+04	1.8643E+03	1.6203E+04	1.9693E+00
7.9533E+02	1.9741E+03	4.9487E+03	3.5087E+04	1.7698E+05	1.7500E+00	1.8643E+03	1.5726E+04	5.2795E+01
7.9533E+02	1.9104E+03	8.1151E+03	3.5087E+04	1.7017E+05	1.3443E+00	1.8643E+03	1.5250E+04	4.4583E-02
7.9533E+02	1.8467E+03	1.6939E+04	3.5087E+04	1.6337E+05	1.7500E+00	1.8643E+03	1.3343E+04	1.7500E+00
7.9533E+02	1.7830E+03	2.9178E+04	3.5087E+04	1.5656E+05	3.5000E+00	1.8643E+03	1.2390E+04	3.1389E+00
7.9533E+02	1.7194E+03	3.8000E+04	3.5087E+04	1.4975E+05	6.1887E+00	1.8643E+03	1.1914E+04	3.0943E+00
7.9533E+02	1.6557E+03	2.6807E+04	3.5087E+04	1.4295E+05	3.7193E+00	1.8643E+03	1.1437E+04	1.7500E+00
7.9533E+02	1.5920E+03	4.8262E+04	3.5087E+04	1.3614E+05	6.5943E+00	1.8643E+03	1.0961E+04	8.0428E+02
7.9533E+02	1.5283E+03	7.7567E+04	3.5087E+04	1.2933E+05	4.8443E+00	1.8643E+03	1.0484E+04	1.2828E+03
7.9533E+02	1.4646E+03	1.1987E+05	3.5087E+04	1.2252E+05	6.5943E+00	1.8643E+03	1.0008E+04	5.4892E+00
7.9533E+02	1.4010E+03	1.7568E+05	3.5087E+04	1.1572E+05	5.2500E+00	1.8643E+03	9.5310E+03	4.8256E+03
7.9533E+02	1.3373E+03	2.6117E+05	3.5087E+04	1.0891E+05	1.8392E+00	1.8643E+03	9.0544E+03	1.7241E+03
7.9533E+02	1.2736E+03	4.1102E+05	3.5087E+04	1.0210E+05	8.3443E+00	1.8643E+03	8.5779E+03	1.3671E+04
7.9533E+02	1.2099E+03	5.0066E+05	3.5087E+04	9.5297E+04	1.1439E+01	1.8643E+03	8.1013E+03	2.9769E+04
7.9533E+02	1.1462E+03	6.4058E+05	3.5087E+04	8.8490E+04	4.7500E+00	1.8643E+03	7.6248E+03	3.9077E+04
7.9533E+02	1.0826E+03	9.6283E+05	3.5087E+04	8.1683E+04	7.0000E+00	1.8643E+03	7.1482E+03	1.1288E+05
7.9533E+02	1.0189E+03	1.3222E+06	3.5087E+04	7.4876E+04	9.6887E+00	1.8643E+03	6.6717E+03	1.3057E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.9533E+02	9.5520E+02	1.5717E+06	3.5087E+04	6.8069E+04	3.3377E+01	1.8643E+03	6.1951E+03	2.4003E+05
7.9533E+02	8.9152E+02	2.1858E+06	3.5087E+04	6.1262E+04	3.1302E+01	1.8643E+03	5.7186E+03	3.9431E+05
7.9533E+02	8.2784E+02	2.8522E+06	3.5087E+04	5.4455E+04	2.8439E+01	1.8643E+03	5.2420E+03	5.7090E+05
7.9533E+02	7.6416E+02	3.4932E+06	3.5087E+04	4.7648E+04	4.3155E+01	1.8643E+03	4.7655E+03	8.8379E+05
7.9533E+02	7.0048E+02	4.0624E+06	3.5087E+04	4.0841E+04	4.2794E+01	1.8643E+03	4.2889E+03	1.1361E+06
7.9533E+02	6.3680E+02	4.7966E+06	3.5087E+04	3.4035E+04	6.7854E+01	1.8643E+03	3.8124E+03	1.2911E+06
7.9533E+02	5.7312E+02	5.3138E+06	3.5087E+04	2.7228E+04	9.5212E+01	1.8643E+03	3.3358E+03	1.6695E+06
7.9533E+02	5.0944E+02	5.8681E+06	3.5087E+04	2.0421E+04	1.3925E+02	1.8643E+03	2.8593E+03	2.0466E+06
7.9533E+02	4.4576E+02	6.0743E+06	3.5087E+04	1.3614E+04	1.7566E+02	1.8643E+03	2.3827E+03	2.2015E+06
7.9533E+02	3.8208E+02	5.9648E+06	3.5087E+04	6.8069E+03	2.7810E+04	1.8643E+03	1.9062E+03	2.0708E+06
7.9533E+02	3.1840E+02	5.3536E+06	3.5087E+04	0.0000E+00	6.2704E+04	1.8643E+03	1.4296E+03	2.3570E+06
7.9533E+02	2.5472E+02	4.3729E+06	2.7221E+04	1.9059E+05	1.3443E+00	1.8643E+03	9.5310E+02	3.3730E+06
7.9533E+02	1.9104E+02	3.7512E+06	2.7221E+04	1.7017E+05	6.2500E-01	1.8643E+03	4.7655E+02	7.3236E+06
7.9533E+02	1.2736E+02	5.3416E+06	2.7221E+04	1.6337E+05	3.0943E+00	1.8643E+03	0.0000E+00	1.6072E+07
7.9533E+02	6.3680E+01	1.6473E+07	2.7221E+04	1.5656E+05	4.4583E-02	1.2354E+03	1.9538E+04	4.4583E-02
7.9533E+02	0.0000E+00	2.5553E+07	2.7221E+04	1.4975E+05	1.3443E+00	1.2354E+03	1.8585E+04	4.4583E-02
7.2265E+02	2.8019E+03	1.4298E+02	2.7221E+04	1.4295E+05	1.7500E+00	1.2354E+03	1.7156E+04	1.2299E+01
7.2265E+02	2.5472E+03	5.6000E+02	2.7221E+04	1.3614E+05	6.2500E-01	1.2354E+03	1.6679E+04	1.3429E+02
7.2265E+02	2.4835E+03	1.8683E+02	2.7221E+04	1.2933E+05	4.1250E+00	1.2354E+03	1.6203E+04	4.4583E-02
7.2265E+02	2.4198E+03	7.8946E+02	2.7221E+04	1.2252E+05	1.3189E+01	1.2354E+03	1.5726E+04	1.3443E+00
7.2265E+02	2.3561E+03	6.7992E+02	2.7221E+04	1.1572E+05	8.7500E+00	1.2354E+03	1.5250E+04	1.1820E-01
7.2265E+02	2.2925E+03	6.2909E+03	2.7221E+04	1.0891E+05	8.7500E+00	1.2354E+03	1.4773E+04	1.6448E+00
7.2265E+02	2.2288E+03	2.8949E+03	2.7221E+04	1.0210E+05	1.7094E+01	1.2354E+03	1.4296E+04	6.4361E+00
7.2265E+02	2.1651E+03	2.3593E+03	2.7221E+04	9.5297E+04	9.2830E+00	1.2354E+03	1.3820E+04	3.0093E+00
7.2265E+02	2.1014E+03	9.0539E+03	2.7221E+04	8.8490E+04	1.9250E+01	1.2354E+03	1.3343E+04	1.3727E+02
7.2265E+02	2.0378E+03	1.2361E+04	2.7221E+04	8.1683E+04	4.8778E+01	1.2354E+03	1.2867E+04	6.7356E+01
7.2265E+02	1.9741E+03	1.6657E+04	2.7221E+04	7.4876E+04	2.6339E+01	1.2354E+03	1.2390E+04	2.9333E+02
7.2265E+02	1.9104E+03	1.7974E+04	2.7221E+04	6.8069E+04	2.4589E+01	1.2354E+03	1.1914E+04	1.2343E+01
7.2265E+02	1.8467E+03	2.2716E+04	2.7221E+04	6.1262E+04	7.5662E+01	1.2354E+03	1.1437E+04	8.1125E+02
7.2265E+02	1.7830E+03	4.7259E+04	2.7221E+04	5.4455E+04	4.0467E+01	1.2354E+03	1.0961E+04	1.6472E+03
7.2265E+02	1.7194E+03	6.7331E+04	2.7221E+04	4.7648E+04	7.4969E+01	1.2354E+03	1.0484E+04	3.3426E+03
7.2265E+02	1.6557E+03	1.1509E+05	2.7221E+04	4.0841E+04	1.3630E+02	1.2354E+03	1.0008E+04	9.5251E+03
7.2265E+02	1.5920E+03	1.2017E+05	2.7221E+04	3.4035E+04	1.7783E+02	1.2354E+03	9.5310E+03	1.2131E+04
7.2265E+02	1.5283E+03	1.5649E+05	2.7221E+04	2.7228E+04	2.3935E+02	1.2354E+03	9.0544E+03	2.0284E+04
7.2265E+02	1.4646E+03	2.2791E+05	2.7221E+04	2.0421E+04	3.7053E+02	1.2354E+03	8.5779E+03	2.7247E+04
7.2265E+02	1.4010E+03	3.0388E+05	2.7221E+04	1.3614E+04	1.3875E+04	1.2354E+03	8.1013E+03	6.6933E+04
7.2265E+02	1.3373E+03	3.7870E+05	2.7221E+04	6.8069E+03	7.0190E+04	1.2354E+03	7.6248E+03	1.8381E+05
7.2265E+02	1.2736E+03	4.5667E+05	2.7221E+04	0.0000E+00	1.4366E+05	1.2354E+03	7.1482E+03	1.9241E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.2265E+02	1.2099E+03	6.7602E+05	1.9355E+04	2.0421E+05	4.4583E-02	1.2354E+03	6.6717E+03	3.5285E+05
7.2265E+02	1.1462E+03	1.0036E+06	1.9355E+04	1.9740E+05	6.2500E-01	1.2354E+03	6.1951E+03	5.4353E+05
7.2265E+02	1.0826E+03	1.0392E+06	1.9355E+04	1.5656E+05	1.8392E+00	1.2354E+03	5.7186E+03	6.9601E+05
7.2265E+02	1.0189E+03	1.4604E+06	1.9355E+04	1.4295E+05	2.0139E+00	1.2354E+03	5.2420E+03	8.7994E+05
7.2265E+02	9.5520E+02	1.9901E+06	1.9355E+04	1.3614E+05	1.9693E+00	1.2354E+03	4.7655E+03	1.1751E+06
7.2265E+02	8.9152E+02	2.1988E+06	1.9355E+04	1.2933E+05	3.0943E+00	1.2354E+03	4.2889E+03	1.5990E+06
7.2265E+02	8.2784E+02	2.9277E+06	1.9355E+04	1.1572E+05	8.4781E+00	1.2354E+03	3.8124E+03	2.0265E+06
7.2265E+02	7.6416E+02	3.6222E+06	1.9355E+04	1.0891E+05	8.3443E+00	1.2354E+03	3.3358E+03	2.4418E+06
7.2265E+02	7.0048E+02	3.9883E+06	1.9355E+04	1.0210E+05	2.3996E+01	1.2354E+03	2.8593E+03	3.1173E+06
7.2265E+02	6.3680E+02	5.1409E+06	1.9355E+04	9.5297E+04	8.8392E+00	1.2354E+03	2.3827E+03	3.5643E+06
7.2265E+02	5.7312E+02	5.3259E+06	1.9355E+04	8.8490E+04	1.6908E+01	1.2354E+03	1.9062E+03	3.7569E+06
7.2265E+02	5.0944E+02	5.6243E+06	1.9355E+04	8.1683E+04	6.2134E+01	1.2354E+03	1.4296E+03	4.1191E+06
7.2265E+02	4.4576E+02	6.1839E+06	1.9355E+04	7.4876E+04	5.6064E+01	1.2354E+03	9.5310E+02	5.3296E+06
7.2265E+02	3.8208E+02	6.4909E+06	1.9355E+04	6.8069E+04	5.7445E+01	1.2354E+03	4.7655E+02	1.1771E+07
7.2265E+02	3.1840E+02	5.5965E+06	1.9355E+04	6.1262E+04	1.2712E+02	1.2354E+03	0.0000E+00	2.5643E+07
7.2265E+02	2.5472E+02	5.0464E+06	1.9355E+04	5.4455E+04	1.8231E+03	6.0641E+02	1.8109E+04	1.7076E+01
7.2265E+02	1.9104E+02	4.2133E+06	1.9355E+04	4.7648E+04	2.0725E+03	6.0641E+02	1.7632E+04	4.7773E+00
7.2265E+02	1.2736E+02	6.0602E+06	1.9355E+04	4.0841E+04	1.9394E+03	6.0641E+02	1.7156E+04	1.3429E+02
7.2265E+02	6.3680E+01	1.8394E+07	1.9355E+04	3.4035E+04	3.6957E+02	6.0641E+02	1.6679E+04	8.4403E+01
7.2265E+02	0.0000E+00	2.8674E+07	1.9355E+04	2.7228E+04	7.5911E+03	6.0641E+02	1.5726E+04	1.7340E+00
6.4998E+02	2.9293E+03	1.2299E+01	1.9355E+04	2.0421E+04	8.3568E+02	6.0641E+02	1.5250E+04	1.8139E+01
6.4998E+02	2.8019E+03	2.7993E+01	1.9355E+04	1.3614E+04	4.7971E+03	6.0641E+02	1.4773E+04	7.7600E+01
6.4998E+02	2.7382E+03	2.7993E+01	1.9355E+04	6.8069E+03	1.3685E+05	6.0641E+02	1.4296E+04	1.5634E+03
6.4998E+02	2.6109E+03	1.3243E+02	1.9355E+04	0.0000E+00	5.7306E+05	6.0641E+02	1.3820E+04	2.1690E+03
6.4998E+02	2.4835E+03	1.0134E+03	1.1490E+04	1.8379E+05	1.3443E+00	6.0641E+02	1.3343E+04	3.6162E+03
6.4998E+02	2.4198E+03	1.6527E+03	1.1490E+04	1.7698E+05	4.4583E-02	6.0641E+02	1.2867E+04	3.6385E+03
6.4998E+02	2.3561E+03	1.9342E+03	1.1490E+04	1.7017E+05	7.1417E-01	6.0641E+02	1.2390E+04	5.7137E+03
6.4998E+02	2.2925E+03	2.5315E+03	1.1490E+04	1.6337E+05	4.4583E-02	6.0641E+02	1.1914E+04	1.0900E+04
6.4998E+02	2.2288E+03	5.3650E+03	1.1490E+04	1.5656E+05	1.3889E+00	6.0641E+02	1.1437E+04	2.6757E+04
6.4998E+02	2.1651E+03	4.3888E+03	1.1490E+04	1.4975E+05	2.1031E+00	6.0641E+02	1.0961E+04	2.9764E+04
6.4998E+02	2.1014E+03	1.0379E+04	1.1490E+04	1.4295E+05	3.8085E+00	6.0641E+02	1.0484E+04	3.9954E+04
6.4998E+02	2.0378E+03	9.1627E+03	1.1490E+04	1.3614E+05	2.0585E+00	6.0641E+02	1.0008E+04	4.1321E+04
6.4998E+02	1.9741E+03	1.0990E+04	1.1490E+04	1.2933E+05	7.5875E-01	6.0641E+02	9.5310E+03	6.2433E+04
6.4998E+02	1.9104E+03	2.0530E+04	1.1490E+04	1.2252E+05	3.5892E+00	6.0641E+02	9.0544E+03	9.8401E+04
6.4998E+02	1.8467E+03	3.8870E+04	1.1490E+04	1.1572E+05	2.4642E+00	6.0641E+02	8.5779E+03	9.4471E+04
6.4998E+02	1.7830E+03	4.6957E+04	1.1490E+04	1.0891E+05	4.2971E+00	6.0641E+02	8.1013E+03	1.3256E+05
6.4998E+02	1.7194E+03	6.4928E+04	1.1490E+04	1.0210E+05	5.1746E+03	6.0641E+02	7.6248E+03	1.8265E+05
6.4998E+02	1.6557E+03	7.2239E+04	1.1490E+04	9.5297E+04	1.7250E+01	6.0641E+02	7.1482E+03	3.09E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.4998E+02	1.5920E+03	8.3903E+04	1.1490E+04	8.8490E+04	1.5556E+04	6.0641E+02	6.6717E+03	4.0117E+05
6.4998E+02	1.5283E+03	1.4527E+05	1.1490E+04	8.1683E+04	2.0725E+04	6.0641E+02	6.1951E+03	5.9348E+05
6.4998E+02	1.4646E+03	1.8745E+05	1.1490E+04	7.4876E+04	2.5934E+04	6.0641E+02	5.7186E+03	9.6162E+05
6.4998E+02	1.4010E+03	1.9700E+05	1.1490E+04	6.8069E+04	1.4267E+02	6.0641E+02	5.2420E+03	1.2431E+06
6.4998E+02	1.3373E+03	3.2532E+05	1.1490E+04	6.1262E+04	5.4010E+03	6.0641E+02	4.7655E+03	1.6324E+06
6.4998E+02	1.2736E+03	4.1231E+05	1.1490E+04	5.4455E+04	1.5813E+04	6.0641E+02	4.2889E+03	2.0789E+06
6.4998E+02	1.2099E+03	6.1156E+05	1.1490E+04	4.7648E+04	2.2829E+04	6.0641E+02	3.8124E+03	2.5936E+06
6.4998E+02	1.1462E+03	7.3982E+05	1.1490E+04	4.0841E+04	4.1862E+04	6.0641E+02	3.3358E+03	3.1071E+06
6.4998E+02	1.0826E+03	9.5641E+05	1.1490E+04	3.4035E+04	1.7996E+04	6.0641E+02	2.8593E+03	4.0387E+06
6.4998E+02	1.0189E+03	1.1896E+06	1.1490E+04	2.7228E+04	2.8587E+04	6.0641E+02	2.3827E+03	5.1802E+06
6.4998E+02	9.5520E+02	1.5868E+06	1.1490E+04	2.0421E+04	1.8383E+04	6.0641E+02	1.9062E+03	5.8266E+06
6.4998E+02	8.9152E+02	1.9317E+06	1.1490E+04	1.3614E+04	8.4242E+04	6.0641E+02	1.4296E+03	6.3203E+06
6.4998E+02	8.2784E+02	2.4295E+06	1.1490E+04	6.8069E+03	6.3786E+05	6.0641E+02	9.5310E+02	7.9422E+06
6.4998E+02	7.6416E+02	3.0429E+06	1.1490E+04	0.0000E+00	3.7336E+06	6.0641E+02	4.7655E+02	1.7892E+07
6.4998E+02	7.0048E+02	3.5956E+06	3.6244E+03	3.2673E+05	1.3443E+00	6.0641E+02	0.0000E+00	3.6559E+07
6.4998E+02	6.3680E+02	4.1902E+06	3.6244E+03	3.0631E+05	1.3443E+00	- 2.2555E+01	1.8585E+04	5.2170E+01
6.4998E+02	5.7312E+02	4.5527E+06	3.6244E+03	2.7908E+05	1.3443E+00	- 2.2555E+01	1.8109E+04	1.1820E-01
6.4998E+02	5.0944E+02	5.3931E+06	3.6244E+03	2.3824E+05	4.4583E-02	- 2.2555E+01	1.7632E+04	8.5006E+01
6.4998E+02	4.4576E+02	5.3984E+06	3.6244E+03	1.9059E+05	4.4583E-02	- 2.2555E+01	1.7156E+04	5.1598E+00
6.4998E+02	3.8208E+02	5.5179E+06	3.6244E+03	1.8379E+05	4.4583E-02	- 2.2555E+01	1.6679E+04	1.3222E+00
6.4998E+02	3.1840E+02	5.1102E+06	3.6244E+03	1.7698E+05	8.9167E-02	- 2.2555E+01	1.6203E+04	1.9812E+01
6.4998E+02	2.5472E+02	4.7852E+06	3.6244E+03	1.7017E+05	4.4583E-02	- 2.2555E+01	1.5726E+04	2.1119E+00
6.4998E+02	1.9104E+02	4.0370E+06	3.6244E+03	1.6337E+05	1.3889E+00	- 2.2555E+01	1.5250E+04	7.9228E+02
6.4998E+02	1.2736E+02	6.1095E+06	3.6244E+03	1.5656E+05	1.3443E+00	- 2.2555E+01	1.4773E+04	1.2461E+03
6.4998E+02	6.3680E+01	1.8114E+07	3.6244E+03	1.4295E+05	4.4583E-02	- 2.2555E+01	1.4296E+04	2.1259E+03
6.4998E+02	0.0000E+00	2.9401E+07	3.6244E+03	1.3614E+05	2.0585E+00	- 2.2555E+01	1.3820E+04	5.7747E+03
5.7730E+02	3.0566E+03	6.2500E-01	3.6244E+03	1.2933E+05	1.5673E+00	- 2.2555E+01	1.3343E+04	1.6573E+04
5.7730E+02	2.8019E+03	4.7773E+00	3.6244E+03	1.2252E+05	5.1477E+00	- 2.2555E+01	1.2867E+04	3.5329E+04
5.7730E+02	2.7382E+03	5.7230E+02	3.6244E+03	1.1572E+05	1.0352E+04	- 2.2555E+01	1.2390E+04	4.8336E+04
5.7730E+02	2.6745E+03	9.9405E+01	3.6244E+03	1.0891E+05	2.0691E+04	- 2.2555E+01	1.1914E+04	8.7909E+04
5.7730E+02	2.6109E+03	6.1284E+02	3.6244E+03	1.0210E+05	1.5540E+04	- 2.2555E+01	1.1437E+04	1.1437E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.7730E+02	2.5472E+03	9.4173E+01	3.6244E+03	9.5297E+04	3.6260E+04	-	1.0961E+04	9.6703E+04
5.7730E+02	2.4835E+03	2.4245E+02	3.6244E+03	8.8490E+04	6.2112E+04	-	1.0484E+04	7.5935E+04
5.7730E+02	2.4198E+03	1.2199E+03	3.6244E+03	8.1683E+04	4.8341E+04	-	1.0008E+04	1.3000E+05
5.7730E+02	2.3561E+03	2.2153E+03	3.6244E+03	7.4876E+04	7.9309E+04	-	9.5310E+03	1.2271E+05
5.7730E+02	2.2925E+03	1.5039E+03	3.6244E+03	6.8069E+04	7.2554E+04	-	9.0544E+03	1.7593E+05
5.7730E+02	2.2288E+03	5.1700E+03	3.6244E+03	6.1262E+04	8.8229E+04	-	8.5779E+03	1.4070E+05
5.7730E+02	2.1651E+03	4.9527E+03	3.6244E+03	5.4455E+04	1.2605E+05	-	8.1013E+03	2.5663E+05
5.7730E+02	2.1014E+03	4.1652E+03	3.6244E+03	4.7648E+04	1.6264E+05	-	7.6248E+03	3.0250E+05
5.7730E+02	2.0378E+03	8.4170E+03	3.6244E+03	4.0841E+04	2.2985E+05	-	7.1482E+03	3.7224E+05
5.7730E+02	1.9741E+03	1.5849E+04	3.6244E+03	3.4035E+04	3.7173E+05	-	6.6717E+03	6.1275E+05
5.7730E+02	1.9104E+03	1.9906E+04	3.6244E+03	2.7228E+04	6.7533E+05	-	6.1951E+03	7.9536E+05
5.7730E+02	1.8467E+03	2.3047E+04	3.6244E+03	2.0421E+04	1.4997E+06	-	5.7186E+03	1.1575E+06
5.7730E+02	1.7830E+03	3.3981E+04	3.6244E+03	1.3614E+04	2.4032E+06	-	5.2420E+03	1.4564E+06
5.7730E+02	1.7194E+03	3.6119E+04	3.6244E+03	6.8069E+03	4.0732E+06	-	4.7655E+03	1.8589E+06
5.7730E+02	1.6557E+03	5.2978E+04	3.6244E+03	0.0000E+00	1.3522E+07	-	4.2889E+03	2.4522E+06
5.7730E+02	1.5920E+03	8.2482E+04	-	3.4035E+05	2.6887E+00	-	3.8124E+03	3.1603E+06
5.7730E+02	1.5283E+03	9.5697E+04	-	2.8589E+05	1.3443E+00	-	3.3358E+03	3.8397E+06
5.7730E+02	1.4646E+03	1.3401E+05	-	2.7908E+05	1.3443E+00	-	2.8593E+03	5.3070E+06
5.7730E+02	1.4010E+03	1.9069E+05	-	1.9740E+05	8.9167E-02	-	2.3827E+03	6.4197E+06
5.7730E+02	1.3373E+03	2.4728E+05	-	1.9059E+05	4.4583E-02	-	1.9062E+03	7.6701E+06
5.7730E+02	1.2736E+03	3.2464E+05	-	1.7698E+05	4.4583E-02	-	1.4296E+03	8.7303E+06
5.7730E+02	1.2099E+03	3.7646E+05	-	1.7017E+05	8.9167E-02	-	9.5310E+02	9.9422E+06
5.7730E+02	1.1462E+03	5.8054E+05	-	1.6337E+05	4.4583E-02	-	4.7655E+02	2.1830E+07
5.7730E+02	1.0826E+03	6.3209E+05	-	1.5656E+05	8.9167E-02	-	0.0000E+00	4.6723E+07
5.7730E+02	1.0189E+03	7.9840E+05	-	1.4975E+05	2.4455E-01	-	1.9062E+04	1.0417E+00
5.7730E+02	9.5520E+02	1.0722E+06	-	1.4295E+05	4.4583E-02	-	1.8585E+04	4.4583E-02
5.7730E+02	8.9152E+02	1.3374E+06	-	1.3614E+05	2.8211E+00	-	1.7632E+04	2.5224E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.7730E+02	8.2784E+02	1.4564E+06	-	1.2933E+05	1.3838E+00	-	1.7156E+04	1.8181E+00
5.7730E+02	7.6416E+02	1.9698E+06	-	1.2252E+05	2.7254E+00	-	1.6679E+04	3.5825E+01
5.7730E+02	7.0048E+02	2.4544E+06	-	1.1572E+05	5.1883E+03	-	1.6203E+04	2.1880E+01
5.7730E+02	6.3680E+02	2.8732E+06	-	1.0891E+05	3.3077E+01	-	1.5726E+04	1.7319E+01
5.7730E+02	5.7312E+02	3.1512E+06	-	1.0210E+05	5.1785E+03	-	1.5250E+04	3.8103E+02
5.7730E+02	5.0944E+02	3.5327E+06	-	9.5297E+04	4.1846E+01	-	1.4773E+04	2.6547E+03
5.7730E+02	4.4576E+02	3.7426E+06	-	8.8490E+04	1.7272E+04	-	1.4296E+04	4.0813E+03
5.7730E+02	3.8208E+02	4.0784E+06	-	8.1683E+04	9.2715E+01	-	1.3820E+04	1.1098E+04
5.7730E+02	3.1840E+02	4.3076E+06	-	7.4876E+04	1.0557E+04	-	1.3343E+04	2.2731E+04
5.7730E+02	2.5472E+02	4.2104E+06	-	6.8069E+04	1.1315E+04	-	1.2867E+04	4.3528E+04
5.7730E+02	1.9104E+02	4.1535E+06	-	6.1262E+04	2.0934E+04	-	1.2390E+04	5.9726E+04
5.7730E+02	1.2736E+02	5.5248E+06	-	5.4455E+04	1.9737E+04	-	1.1914E+04	8.4808E+04
5.7730E+02	6.3680E+01	1.7388E+07	-	4.7648E+04	2.6251E+04	-	1.1437E+04	1.1237E+05
5.7730E+02	0.0000E+00	3.2408E+07	-	4.0841E+04	1.1898E+05	-	1.0961E+04	1.3954E+05
5.0462E+02	3.1840E+03	6.2500E-01	-	3.4035E+04	1.7465E+05	-	1.0484E+04	1.4149E+05
5.0462E+02	2.8656E+03	1.1252E+03	-	2.7228E+04	5.1075E+05	-	1.0008E+04	1.0245E+05
5.0462E+02	2.8019E+03	1.3375E-01	-	2.0421E+04	8.7970E+05	-	9.5310E+03	1.2743E+05
5.0462E+02	2.6745E+03	7.6230E+00	-	1.3614E+04	1.4564E+06	-	9.0544E+03	1.1141E+05
5.0462E+02	2.6109E+03	1.1248E+03	-	6.8069E+03	2.4722E+06	-	8.5779E+03	1.9192E+05
5.0462E+02	2.5472E+03	7.8918E+02	-	0.0000E+00	8.2101E+06	-	8.1013E+03	1.9629E+05
5.0462E+02	2.4835E+03	1.1547E+03	-	3.1312E+05	1.3443E+00	-	7.6248E+03	3.1311E+05
5.0462E+02	2.4198E+03	1.2559E+03	-	3.0631E+05	1.7500E+00	-	7.1482E+03	4.3511E+05
5.0462E+02	2.3561E+03	4.2278E+02	-	2.9270E+05	1.7500E+00	-	6.6717E+03	5.7771E+05
5.0462E+02	2.2925E+03	4.6455E+03	-	2.8589E+05	3.5000E+00	-	6.1951E+03	8.1326E+05
5.0462E+02	2.2288E+03	1.7511E+03	-	2.7228E+05	1.7500E+00	-	5.7186E+03	1.1451E+06
5.0462E+02	2.1651E+03	3.9077E+03	-	2.6547E+05	2.3750E+00	-	5.2420E+03	1.4637E+06
5.0462E+02	2.1014E+03	3.0061E+03	-	2.3824E+05	6.6958E-01	-	4.7655E+05	1.0572E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.0462E+02	2.0378E+03	2.7449E+03	-	2.2463E+05	4.4583E-02	-	4.2889E+03	2.3799E+06
5.0462E+02	1.9741E+03	4.5313E+03	-	2.1782E+05	6.6958E-01	-	3.8124E+03	2.9858E+06
5.0462E+02	1.9104E+03	9.3471E+03	-	2.1101E+05	4.4583E-02	-	3.3358E+03	3.8640E+06
5.0462E+02	1.8467E+03	1.0844E+04	-	2.0421E+05	4.4583E-02	-	2.8593E+03	4.6943E+06
5.0462E+02	1.7830E+03	1.2025E+04	-	1.9740E+05	1.7833E-01	-	2.3827E+03	5.7200E+06
5.0462E+02	1.7194E+03	2.1456E+04	-	1.9059E+05	4.4583E-02	-	1.9062E+03	5.9992E+06
5.0462E+02	1.6557E+03	3.7477E+04	-	1.8379E+05	4.4583E-02	-	1.4296E+03	6.5289E+06
5.0462E+02	1.5920E+03	4.6223E+04	-	1.7698E+05	4.4583E-02	-	9.5310E+02	8.5603E+06
5.0462E+02	1.5283E+03	4.0252E+04	-	1.7017E+05	8.9167E-02	-	4.7655E+02	1.8153E+07
5.0462E+02	1.4646E+03	6.9165E+04	-	1.6337E+05	2.3828E-01	-	0.0000E+00	3.7387E+07
5.0462E+02	1.4010E+03	8.8940E+04	-	1.5656E+05	8.9167E-02	-	1.9538E+04	4.4583E-02
5.0462E+02	1.3373E+03	1.1643E+05	-	1.4975E+05	1.0729E+01	-	1.8109E+04	4.4583E-02
5.0462E+02	1.2736E+03	1.3447E+05	-	1.4295E+05	1.4781E+00	-	1.7632E+04	8.4853E-01
5.0462E+02	1.2099E+03	1.6392E+05	-	1.3614E+05	8.9167E-02	-	1.7156E+04	4.8199E+00
5.0462E+02	1.1462E+03	2.5925E+05	-	1.2933E+05	2.1548E+01	-	1.6679E+04	1.0176E+01
5.0462E+02	1.0826E+03	3.4237E+05	-	1.2252E+05	3.6926E+01	-	1.6203E+04	3.7850E+01
5.0462E+02	1.0189E+03	3.3539E+05	-	1.1572E+05	6.4708E+01	-	1.5726E+04	2.3035E+02
5.0462E+02	9.5520E+02	3.8972E+05	-	1.0891E+05	1.4054E+01	-	1.5250E+04	1.6345E+02
5.0462E+02	8.9152E+02	5.6211E+05	-	1.0210E+05	1.9509E+02	-	1.4773E+04	5.6376E+02
5.0462E+02	8.2784E+02	6.3849E+05	-	9.5297E+04	1.8776E+03	-	1.4296E+04	1.6820E+03
5.0462E+02	7.6416E+02	7.8980E+05	-	8.8490E+04	2.6697E+02	-	1.3820E+04	2.1112E+03
5.0462E+02	7.0048E+02	9.5111E+05	-	8.1683E+04	2.0191E+03	-	1.3343E+04	6.4172E+03
5.0462E+02	6.3680E+02	1.0116E+06	-	7.4876E+04	4.5304E+03	-	1.2867E+04	1.7699E+04
5.0462E+02	5.7312E+02	1.2015E+06	-	6.8069E+04	1.1176E+04	-	1.2390E+04	1.8658E+04
5.0462E+02	5.0944E+02	1.4775E+06	-	6.1262E+04	1.4348E+04	-	1.1914E+04	1.6643E+04
5.0462E+02	4.4576E+02	1.8770E+06	-	5.4455E+04	2.1059E+04	-	1.1437E+04	2.9326E+04
5.0462E+02	3.8208E+02	2.4313E+06	-	4.7648E+04	6.4939E+04	-	1.0961E+04	4.1506E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.0462E+02	3.1840E+02	3.2345E+06	-	4.0841E+04	1.3632E+05	-	1.0484E+04	3.1898E+04
5.0462E+02	2.5472E+02	4.2598E+06	-	3.4035E+04	3.7129E+05	-	1.0008E+04	7.4192E+04
5.0462E+02	1.9104E+02	5.2622E+06	-	2.7228E+04	7.1475E+05	-	9.5310E+03	7.8615E+04
5.0462E+02	1.2736E+02	7.0620E+06	-	2.0421E+04	1.1767E+06	-	9.0544E+03	1.0482E+05
5.0462E+02	6.3680E+01	2.0013E+07	-	1.3614E+04	1.5489E+06	-	8.5779E+03	1.2052E+05
5.0462E+02	0.0000E+00	3.8699E+07	-	6.8069E+03	3.4683E+06	-	8.1013E+03	1.7865E+05
4.3194E+02	2.8019E+03	1.9693E+00	-	0.0000E+00	8.6948E+06	-	7.6248E+03	2.4207E+05
4.3194E+02	2.7382E+03	6.1217E+00	-	3.4035E+05	1.3443E+00	-	7.1482E+03	4.0030E+05
4.3194E+02	2.6745E+03	1.1761E+01	-	3.1992E+05	5.2085E+00	-	6.6717E+03	5.0566E+05
4.3194E+02	2.6109E+03	1.4110E+02	-	3.1312E+05	5.2085E+00	-	6.1951E+03	6.4483E+05
4.3194E+02	2.5472E+03	5.2531E+00	-	3.0631E+05	1.3443E+00	-	5.7186E+03	9.8259E+05
4.3194E+02	2.4835E+03	3.6435E+01	-	2.9950E+05	1.3443E+00	-	5.2420E+03	1.1642E+06
4.3194E+02	2.4198E+03	5.3243E+02	-	2.9270E+05	4.8443E+00	-	4.7655E+03	1.5612E+06
4.3194E+02	2.3561E+03	4.8050E+02	-	2.8589E+05	1.7500E+00	-	4.2889E+03	1.9255E+06
4.3194E+02	2.2925E+03	3.3057E+02	-	2.7228E+05	1.7500E+00	-	3.8124E+03	2.4044E+06
4.3194E+02	2.2288E+03	5.3104E+02	-	2.6547E+05	4.1250E+00	-	3.3358E+03	2.8706E+06
4.3194E+02	2.1651E+03	8.4941E+02	-	2.5866E+05	1.7500E+00	-	2.8593E+03	3.4662E+06
4.3194E+02	2.1014E+03	9.9083E+02	-	2.5186E+05	3.5000E+00	-	2.3827E+03	3.5567E+06
4.3194E+02	2.0378E+03	9.0783E+02	-	2.4505E+05	1.3375E-01	-	1.9062E+03	3.9156E+06
4.3194E+02	1.9741E+03	1.0532E+03	-	2.3143E+05	4.4583E-02	-	1.4296E+03	3.9726E+06
4.3194E+02	1.9104E+03	2.0844E+03	-	2.2463E+05	1.7946E+00	-	9.5310E+02	5.5508E+06
4.3194E+02	1.8467E+03	8.0396E+03	-	2.1782E+05	6.2500E-01	-	4.7655E+02	1.2768E+07
4.3194E+02	1.7830E+03	4.5910E+03	-	2.1101E+05	1.3375E-01	-	0.0000E+00	2.7399E+07
4.3194E+02	1.7194E+03	5.8764E+03	-	1.9740E+05	4.4583E-02	-	2.0968E+04	4.4583E-02
4.3194E+02	1.6557E+03	8.6128E+03	-	1.9059E+05	2.2292E-01	-	1.8109E+04	4.7371E-01
4.3194E+02	1.5920E+03	1.4488E+04	-	1.8379E+05	8.9167E-02	-	1.7632E+04	7.3620E-02
4.3194E+02	1.5283E+03	1.2633E+04	-	1.7698E+05	8.0333E-01	-	1.7156E+04	4.2515E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.3194E+02	1.4646E+03	2.0729E+04	- 1.9972E+04	1.7017E+05	8.9167E-02	- 1.9094E+03	1.6679E+04	1.5444E+00
4.3194E+02	1.4010E+03	2.3258E+04	- 1.9972E+04	1.6337E+05	8.9167E-02	- 1.9094E+03	1.6203E+04	1.4603E+02
4.3194E+02	1.3373E+03	2.0927E+04	- 1.9972E+04	1.5656E+05	1.2946E+00	- 1.9094E+03	1.5726E+04	2.1096E+01
4.3194E+02	1.2736E+03	3.4239E+04	- 1.9972E+04	1.4975E+05	1.3375E-01	- 1.9094E+03	1.5250E+04	1.8018E+01
4.3194E+02	1.2099E+03	3.9165E+04	- 1.9972E+04	1.4295E+05	1.0032E+01	- 1.9094E+03	1.4773E+04	4.9516E+02
4.3194E+02	1.1462E+03	5.3406E+04	- 1.9972E+04	1.3614E+05	2.8604E+00	- 1.9094E+03	1.4296E+04	9.2086E+02
4.3194E+02	1.0826E+03	7.0428E+04	- 1.9972E+04	1.2933E+05	1.2812E+01	- 1.9094E+03	1.3820E+04	6.7323E+02
4.3194E+02	1.0189E+03	9.9338E+04	- 1.9972E+04	1.2252E+05	6.3140E+01	- 1.9094E+03	1.3343E+04	2.2193E+02
4.3194E+02	9.5520E+02	1.0754E+05	- 1.9972E+04	1.1572E+05	1.5207E+02	- 1.9094E+03	1.2867E+04	1.8570E+02
4.3194E+02	8.9152E+02	1.2291E+05	- 1.9972E+04	1.0891E+05	1.9200E+03	- 1.9094E+03	1.2390E+04	1.9721E+03
4.3194E+02	8.2784E+02	1.2786E+05	- 1.9972E+04	1.0210E+05	1.8092E+03	- 1.9094E+03	1.1914E+04	1.7960E+03
4.3194E+02	7.6416E+02	2.2105E+05	- 1.9972E+04	9.5297E+04	1.9220E+02	- 1.9094E+03	1.1437E+04	9.9504E+03
4.3194E+02	7.0048E+02	2.1809E+05	- 1.9972E+04	8.8490E+04	1.2497E+03	- 1.9094E+03	1.0961E+04	6.1689E+03
4.3194E+02	6.3680E+02	2.6054E+05	- 1.9972E+04	8.1683E+04	3.5788E+03	- 1.9094E+03	1.0484E+04	9.2591E+03
4.3194E+02	5.7312E+02	3.5462E+05	- 1.9972E+04	7.4876E+04	7.1514E+03	- 1.9094E+03	1.0008E+04	1.8885E+04
4.3194E+02	5.0944E+02	5.5170E+05	- 1.9972E+04	6.8069E+04	6.5139E+03	- 1.9094E+03	9.5310E+03	1.9112E+04
4.3194E+02	4.4576E+02	1.0467E+06	- 1.9972E+04	6.1262E+04	2.0825E+04	- 1.9094E+03	9.0544E+03	6.1932E+04
4.3194E+02	3.8208E+02	1.5184E+06	- 1.9972E+04	5.4455E+04	4.5426E+04	- 1.9094E+03	8.5779E+03	5.8852E+04
4.3194E+02	3.1840E+02	2.8837E+06	- 1.9972E+04	4.7648E+04	4.7005E+04	- 1.9094E+03	8.1013E+03	8.9961E+04
4.3194E+02	2.5472E+02	5.2720E+06	- 1.9972E+04	4.0841E+04	2.1505E+05	- 1.9094E+03	7.6248E+03	1.7138E+05
4.3194E+02	1.9104E+02	6.4403E+06	- 1.9972E+04	3.4035E+04	5.9516E+05	- 1.9094E+03	7.1482E+03	3.0052E+05
4.3194E+02	1.2736E+02	7.6519E+06	- 1.9972E+04	2.7228E+04	1.5359E+06	- 1.9094E+03	6.6717E+03	3.2188E+05
4.3194E+02	6.3680E+01	1.8313E+07	- 1.9972E+04	2.0421E+04	3.5026E+06	- 1.9094E+03	6.1951E+03	5.6043E+05
4.3194E+02	0.0000E+00	4.0475E+07	- 1.9972E+04	1.3614E+04	4.9630E+06	- 1.9094E+03	5.7186E+03	6.4421E+05
3.5927E+02	2.7382E+03	1.1227E+03	- 1.9972E+04	6.8069E+03	8.6602E+06	- 1.9094E+03	5.2420E+03	1.0874E+06
3.5927E+02	2.6109E+03	1.4830E+01	- 1.9972E+04	0.0000E+00	1.9152E+07	- 1.9094E+03	4.7655E+03	1.3185E+06
3.5927E+02	2.5472E+03	1.5670E+01	- 2.7838E+04	3.1992E+05	1.3443E+00	- 1.9094E+03	4.2889E+05	1.5357E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.5927E+02	2.4835E+03	1.3265E+02	-	3.1312E+05	2.6887E+00	-	3.8124E+03	1.8225E+06
3.5927E+02	2.4198E+03	4.8931E+00	-	3.0631E+05	1.3443E+00	-	3.3358E+03	2.2447E+06
3.5927E+02	2.3561E+03	3.3333E+01	-	2.9950E+05	3.0943E+00	-	2.8593E+03	2.4199E+06
3.5927E+02	2.2925E+03	5.9642E+00	-	2.9270E+05	3.0943E+00	-	2.3827E+03	2.4469E+06
3.5927E+02	2.2288E+03	1.5950E+02	-	2.8589E+05	1.7500E+00	-	1.9062E+03	2.3774E+06
3.5927E+02	2.1651E+03	1.5695E+02	-	2.7908E+05	5.2500E+00	-	1.4296E+03	2.6614E+06
3.5927E+02	2.1014E+03	1.7982E+03	-	2.7228E+05	9.6887E+00	-	9.5310E+02	4.0868E+06
3.5927E+02	2.0378E+03	2.0965E+02	-	2.6547E+05	1.1397E+01	-	4.7655E+02	8.9389E+06
3.5927E+02	1.9741E+03	2.5592E+02	-	2.5866E+05	3.5000E+00	-	0.0000E+00	1.7378E+07
3.5927E+02	1.9104E+03	1.0644E+03	-	2.5186E+05	2.3750E+00	-	2.0968E+04	8.3361E+01
3.5927E+02	1.8467E+03	1.4763E+02	-	2.4505E+05	3.5000E+00	-	1.8585E+04	4.4583E-02
3.5927E+02	1.7830E+03	9.0862E+01	-	2.3824E+05	6.9585E+00	-	1.8109E+04	4.2913E-01
3.5927E+02	1.7194E+03	5.7462E+02	-	2.3143E+05	1.7500E+00	-	1.7632E+04	4.6861E+00
3.5927E+02	1.6557E+03	8.9023E+02	-	2.2463E+05	6.2500E-01	-	1.7156E+04	2.5636E+01
3.5927E+02	1.5920E+03	1.4469E+03	-	2.1101E+05	4.4583E-02	-	1.6679E+04	9.9577E-01
3.5927E+02	1.5283E+03	1.8989E+03	-	1.9740E+05	1.3375E-01	-	1.6203E+04	5.4583E+00
3.5927E+02	1.4646E+03	1.0822E+03	-	1.9059E+05	3.5446E+00	-	1.5726E+04	4.3134E+00
3.5927E+02	1.4010E+03	2.9082E+03	-	1.8379E+05	6.6958E-01	-	1.5250E+04	5.7719E+01
3.5927E+02	1.3373E+03	6.0917E+03	-	1.7698E+05	2.3750E+00	-	1.4773E+04	1.4632E+02
3.5927E+02	1.2736E+03	1.0874E+04	-	1.7017E+05	9.1036E-01	-	1.4296E+04	1.9480E+02
3.5927E+02	1.2099E+03	5.8654E+03	-	1.5656E+05	8.9167E-02	-	1.3820E+04	1.3832E+02
3.5927E+02	1.1462E+03	9.4704E+03	-	1.4975E+05	2.3683E+01	-	1.3343E+04	1.1525E+02
3.5927E+02	1.0826E+03	1.5974E+04	-	1.4295E+05	3.4722E+00	-	1.2867E+04	1.9731E+02
3.5927E+02	1.0189E+03	2.1096E+04	-	1.3614E+05	1.0722E+02	-	1.2390E+04	4.2938E+01
3.5927E+02	9.5520E+02	2.0066E+04	-	1.2933E+05	1.5016E+01	-	1.1914E+04	1.1430E+02
3.5927E+02	8.9152E+02	3.2535E+04	-	1.2252E+05	2.0141E+02	-	1.1437E+04	1.6594E+02
3.5927E+02	8.2784E+02	6.2449E+04	-	1.1572E+05	3.6412E+01	-	1.0961E+04	2.2531E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.5927E+02	7.6416E+02	6.9593E+04	-	1.0891E+05	8.1797E+02	-	1.0484E+04	1.8685E+03
3.5927E+02	7.0048E+02	1.1400E+05	-	1.0210E+05	4.3115E+02	-	1.0008E+04	3.1344E+02
3.5927E+02	6.3680E+02	1.9644E+05	-	9.5297E+04	4.5797E+02	-	9.5310E+03	3.0909E+03
3.5927E+02	5.7312E+02	2.4502E+05	-	8.8490E+04	9.0287E+02	-	9.0544E+03	7.7776E+03
3.5927E+02	5.0944E+02	5.6874E+05	-	8.1683E+04	6.6769E+03	-	8.5779E+03	1.0279E+04
3.5927E+02	4.4576E+02	9.4681E+05	-	7.4876E+04	1.2716E+04	-	8.1013E+03	2.3832E+04
3.5927E+02	3.8208E+02	2.0489E+06	-	6.8069E+04	1.2175E+04	-	7.6248E+03	5.0612E+04
3.5927E+02	3.1840E+02	3.2288E+06	-	6.1262E+04	3.2594E+04	-	7.1482E+03	8.9472E+04
3.5927E+02	2.5472E+02	5.2971E+06	-	5.4455E+04	6.4582E+04	-	6.6717E+03	1.9161E+05
3.5927E+02	1.9104E+02	7.5913E+06	-	4.7648E+04	1.2917E+05	-	6.1951E+03	2.5466E+05
3.5927E+02	1.2736E+02	8.1692E+06	-	4.0841E+04	2.2054E+05	-	5.7186E+03	3.9640E+05
3.5927E+02	6.3680E+01	1.2968E+07	-	3.4035E+04	4.9099E+05	-	5.2420E+03	5.1813E+05
3.5927E+02	0.0000E+00	3.3683E+07	-	2.7228E+04	1.3746E+06	-	4.7655E+03	7.6716E+05
2.8659E+02	2.8019E+03	7.8972E+00	-	2.0421E+04	3.5588E+06	-	4.2889E+03	1.0322E+06
2.8659E+02	2.7382E+03	1.3443E+00	-	1.3614E+04	5.5951E+06	-	3.8124E+03	1.2387E+06
2.8659E+02	2.6745E+03	2.7333E+00	-	6.8069E+03	1.0521E+07	-	3.3358E+03	1.4636E+06
2.8659E+02	2.6109E+03	6.9585E+00	-	0.0000E+00	2.0376E+07	-	2.8593E+03	1.5463E+06
2.8659E+02	2.4835E+03	3.1389E+00	-	3.1992E+05	1.3443E+00	-	2.3827E+03	1.6229E+06
2.8659E+02	2.4198E+03	5.2085E+00	-	3.1312E+05	4.0331E+00	-	1.9062E+03	1.4933E+06
2.8659E+02	2.3561E+03	3.1835E+00	-	3.0631E+05	2.6887E+00	-	1.4296E+03	1.5941E+06
2.8659E+02	2.2925E+03	8.9220E+00	-	2.9950E+05	1.3443E+00	-	9.5310E+02	2.7689E+06
2.8659E+02	2.2288E+03	1.3150E+01	-	2.9270E+05	5.7830E+00	-	4.7655E+02	5.5809E+06
2.8659E+02	2.1651E+03	2.1355E+02	-	2.8589E+05	3.0943E+00	-	0.0000E+00	1.1232E+07
2.8659E+02	2.1014E+03	4.2277E+01	-	2.7908E+05	5.2085E+00	-	1.9062E+04	6.2500E-01
2.8659E+02	2.0378E+03	4.6511E+01	-	2.7228E+05	4.4387E+00	-	1.8109E+04	5.4733E-01
2.8659E+02	1.9741E+03	2.4342E+02	-	2.6547E+05	9.6918E+00	-	1.7632E+04	4.2913E-01
2.8659E+02	1.9104E+03	2.2005E+03	-	2.5866E+05	6.9585E+00	-	1.7156E+04	5.0273E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.8659E+02	1.8467E+03	7.0998E+00	-	2.5186E+05	4.7500E+00	-	1.6679E+04	4.7597E+00
2.8659E+02	1.7830E+03	4.8596E+01	-	2.4505E+05	5.2946E+00	-	1.6203E+04	5.7402E+00
2.8659E+02	1.7194E+03	1.3605E+02	-	2.3824E+05	1.8392E+00	-	1.5726E+04	1.9317E+00
2.8659E+02	1.6557E+03	6.0595E+01	-	2.3143E+05	1.4542E+01	-	1.5250E+04	1.6937E+01
2.8659E+02	1.5920E+03	1.5433E+02	-	2.2463E+05	8.9167E-02	-	1.4773E+04	1.4711E+01
2.8659E+02	1.5283E+03	7.4739E+02	-	2.1782E+05	6.6958E-01	-	1.4296E+04	1.5564E+01
2.8659E+02	1.4646E+03	6.1776E+02	-	2.1101E+05	7.1417E-01	-	1.3820E+04	1.3473E+01
2.8659E+02	1.4010E+03	5.2035E+02	-	1.9740E+05	6.6958E-01	-	1.3343E+04	1.7876E+01
2.8659E+02	1.3373E+03	6.6855E+02	-	1.9059E+05	1.3868E+00	-	1.2867E+04	2.2193E+01
2.8659E+02	1.2736E+03	1.3232E+03	-	1.8379E+05	1.0657E+01	-	1.2390E+04	1.1056E+01
2.8659E+02	1.2099E+03	1.9624E+03	-	1.7017E+05	1.3753E+01	-	1.1914E+04	4.5180E+01
2.8659E+02	1.1462E+03	1.2185E+03	-	1.6337E+05	8.7695E-01	-	1.1437E+04	1.9422E+02
2.8659E+02	1.0826E+03	2.1522E+03	-	1.5656E+05	1.2658E+01	-	1.0961E+04	2.6344E+02
2.8659E+02	1.0189E+03	3.9072E+03	-	1.4975E+05	3.8469E+00	-	1.0484E+04	1.1408E+02
2.8659E+02	9.5520E+02	5.6827E+03	-	1.4295E+05	1.8852E+02	-	1.0008E+04	3.7969E+01
2.8659E+02	8.9152E+02	1.2598E+04	-	1.3614E+05	6.4406E+01	-	9.5310E+03	1.7529E+02
2.8659E+02	8.2784E+02	8.9078E+03	-	1.2933E+05	1.2967E+02	-	9.0544E+03	2.7760E+02
2.8659E+02	7.6416E+02	2.0432E+04	-	1.2252E+05	3.3363E+02	-	8.5779E+03	8.2752E+02
2.8659E+02	7.0048E+02	3.1639E+04	-	1.1572E+05	3.1837E+02	-	8.1013E+03	1.2918E+04
2.8659E+02	6.3680E+02	1.0795E+05	-	1.0891E+05	4.9764E+02	-	7.6248E+03	5.7934E+03
2.8659E+02	5.7312E+02	1.6889E+05	-	1.0210E+05	1.3886E+03	-	7.1482E+03	2.6767E+04
2.8659E+02	5.0944E+02	4.3270E+05	-	9.5297E+04	1.3957E+03	-	6.6717E+03	3.0336E+04
2.8659E+02	4.4576E+02	8.0967E+05	-	8.8490E+04	5.5858E+03	-	6.1951E+03	6.9646E+04
2.8659E+02	3.8208E+02	1.5230E+06	-	8.1683E+04	1.9609E+03	-	5.7186E+03	1.1036E+05
2.8659E+02	3.1840E+02	2.6922E+06	-	7.4876E+04	1.4354E+04	-	5.2420E+03	2.4995E+05
2.8659E+02	2.5472E+02	4.6854E+06	-	6.8069E+04	1.0782E+04	-	4.7655E+03	4.1460E+05
2.8659E+02	1.9104E+02	6.5095E+06	-	6.1262E+04	7.1050E+03	-	4.2889E+03	5.1122E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.8659E+02	1.2736E+02	8.5136E+06	-	5.4455E+04	5.1456E+04	-	3.8124E+03	6.8648E+05
2.8659E+02	6.3680E+01	1.1976E+07	-	4.7648E+04	1.4258E+05	-	3.3358E+03	7.8153E+05
2.8659E+02	0.0000E+00	3.5166E+07	-	4.0841E+04	2.4010E+05	-	2.8593E+03	8.6431E+05
2.1391E+02	2.9293E+03	1.7500E+00	-	3.4035E+04	5.8603E+05	-	2.3827E+03	9.0525E+05
2.1391E+02	2.7382E+03	6.2500E-01	-	2.7228E+04	1.2026E+06	-	1.9062E+03	9.1574E+05
2.1391E+02	2.6109E+03	1.3443E+00	-	2.0421E+04	2.7171E+06	-	1.4296E+03	9.2030E+05
2.1391E+02	2.5472E+03	4.4387E+00	-	1.3614E+04	4.3483E+06	-	9.5310E+02	1.5216E+06
2.1391E+02	2.4835E+03	6.6866E+00	-	6.8069E+03	8.1327E+06	-	4.7655E+02	3.7127E+06
2.1391E+02	2.4198E+03	3.5000E+00	-	0.0000E+00	1.6541E+07	-	0.0000E+00	6.9568E+06
2.1391E+02	2.3561E+03	3.3173E+00	-	3.3354E+05	1.3443E+00	-	2.0968E+04	4.4583E-02
2.1391E+02	2.2925E+03	7.5776E+00	-	2.9950E+05	5.2085E+00	-	1.9538E+04	6.2500E-01
2.1391E+02	2.2288E+03	4.1250E+00	-	2.9270E+05	1.0417E+01	-	1.7632E+04	6.2500E-01
2.1391E+02	2.1651E+03	2.4060E+01	-	2.8589E+05	6.9585E+00	-	1.6679E+04	3.5898E-01
2.1391E+02	2.1014E+03	3.7193E+00	-	2.7908E+05	1.7500E+00	-	1.5250E+04	6.5096E+00
2.1391E+02	2.0378E+03	3.5446E+00	-	2.7228E+05	6.8137E+00	-	1.4773E+04	4.2082E+00
2.1391E+02	1.9741E+03	1.4051E+01	-	2.6547E+05	1.3443E+00	-	1.4296E+04	1.0490E+00
2.1391E+02	1.9104E+03	5.0003E+01	-	2.5866E+05	4.0331E+00	-	1.3820E+04	3.3579E+00
2.1391E+02	1.8467E+03	2.1191E+01	-	2.5186E+05	4.8443E+00	-	1.3343E+04	2.3860E+00
2.1391E+02	1.7830E+03	1.0876E+02	-	2.4505E+05	4.8443E+00	-	1.2867E+04	2.3985E+00
2.1391E+02	1.7194E+03	5.7446E+01	-	2.3824E+05	1.7500E+00	-	1.2390E+04	8.5929E+00
2.1391E+02	1.6557E+03	9.1935E+01	-	2.3143E+05	3.5446E+00	-	1.1914E+04	7.3912E+00
2.1391E+02	1.5920E+03	8.2270E+01	-	2.1782E+05	7.1417E-01	-	1.1437E+04	8.5909E+01
2.1391E+02	1.5283E+03	1.4088E+02	-	2.1101E+05	6.6958E-01	-	1.0961E+04	6.9781E+00
2.1391E+02	1.4646E+03	1.1043E+02	-	2.0421E+05	1.8843E+00	-	1.0484E+04	9.6913E+00
2.1391E+02	1.4010E+03	1.2793E+02	-	1.9740E+05	7.6230E+00	-	1.0008E+04	5.4619E+00
2.1391E+02	1.3373E+03	8.0098E+01	-	1.9059E+05	3.3304E+00	-	9.5310E+03	2.1309E+02
2.1391E+02	1.2736E+03	1.8481E+02	-	1.8379E+05	2.0307E+00	-	9.0544E+05	6.3237E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.1391E+02	1.2099E+03	5.4301E+02	-	1.7698E+05	1.1615E+01	-	8.5779E+03	7.9822E+02
2.1391E+02	1.1462E+03	4.0584E+02	-	1.7017E+05	1.0617E+00	-	8.1013E+03	2.7379E+02
2.1391E+02	1.0826E+03	9.3565E+02	-	1.6337E+05	2.0316E+01	-	7.6248E+03	2.0925E+03
2.1391E+02	1.0189E+03	1.4307E+03	-	1.5656E+05	6.3970E+01	-	7.1482E+03	6.1475E+02
2.1391E+02	9.5520E+02	9.4498E+02	-	1.4975E+05	1.4608E+02	-	6.6717E+03	3.9040E+03
2.1391E+02	8.9152E+02	2.4096E+03	-	1.4295E+05	3.1804E+01	-	6.1951E+03	6.8368E+03
2.1391E+02	8.2784E+02	2.6661E+03	-	1.3614E+05	8.6735E+01	-	5.7186E+03	1.8549E+04
2.1391E+02	7.6416E+02	9.2902E+03	-	1.2933E+05	2.5809E+02	-	5.2420E+03	2.9026E+04
2.1391E+02	7.0048E+02	2.2929E+04	-	1.2252E+05	4.5200E+02	-	4.7655E+03	8.3349E+04
2.1391E+02	6.3680E+02	4.0168E+04	-	1.1572E+05	7.8114E+02	-	4.2889E+03	1.7086E+05
2.1391E+02	5.7312E+02	9.7693E+04	-	1.0891E+05	7.1338E+02	-	3.8124E+03	2.4900E+05
2.1391E+02	5.0944E+02	1.7765E+05	-	1.0210E+05	1.1310E+03	-	3.3358E+03	2.8879E+05
2.1391E+02	4.4576E+02	4.0990E+05	-	9.5297E+04	1.4072E+03	-	2.8593E+03	3.9882E+05
2.1391E+02	3.8208E+02	8.6562E+05	-	8.8490E+04	2.3338E+03	-	2.3827E+03	3.5391E+05
2.1391E+02	3.1840E+02	1.9911E+06	-	8.1683E+04	2.6102E+03	-	1.9062E+03	4.7802E+05
2.1391E+02	2.5472E+02	4.3559E+06	-	7.4876E+04	5.2909E+03	-	1.4296E+03	4.7953E+05
2.1391E+02	1.9104E+02	8.0841E+06	-	6.8069E+04	1.4060E+04	-	9.5310E+02	7.4183E+05
2.1391E+02	1.2736E+02	1.2191E+07	-	6.1262E+04	2.2762E+04	-	4.7655E+02	1.9926E+06
2.1391E+02	6.3680E+01	1.9250E+07	-	5.4455E+04	5.9777E+04	-	0.0000E+00	3.9324E+06
2.1391E+02	0.0000E+00	4.9069E+07	-	4.7648E+04	1.2895E+05	-	2.1445E+04	4.4583E-02
1.4123E+02	3.0566E+03	1.7500E+00	-	4.0841E+04	3.5642E+05	-	1.9538E+04	1.3443E+00
1.4123E+02	2.8019E+03	4.4583E-02	-	3.4035E+04	7.5532E+05	-	1.6679E+04	8.3361E+01
1.4123E+02	2.7382E+03	1.7946E+00	-	2.7228E+04	1.5549E+06	-	1.5250E+04	2.5000E+00
1.4123E+02	2.6745E+03	6.9585E+00	-	2.0421E+04	2.7835E+06	-	1.3343E+04	4.4583E-02
1.4123E+02	2.6109E+03	1.7500E+00	-	1.3614E+04	3.5366E+06	-	1.2867E+04	1.2500E+00
1.4123E+02	2.5472E+03	3.0943E+00	-	6.8069E+03	6.8332E+06	-	1.2390E+04	4.4583E-02
1.4123E+02	2.4835E+03	1.7500E+00	-	0.0000E+00	1.0735E+07	-	1.1914E+04	4.4583E-02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.4123E+02	2.4198E+03	7.0031E+00	-	3.1312E+05	1.3443E+00	-	1.1437E+04	4.4781E+00
1.4123E+02	2.3561E+03	3.5000E+00	-	2.8589E+05	6.9585E+00	-	1.0961E+04	3.8666E+00
1.4123E+02	2.2925E+03	1.4781E+00	-	2.7908E+05	6.5528E+00	-	1.0484E+04	8.7595E+00
1.4123E+02	2.1651E+03	2.2629E+01	-	2.7228E+05	4.4387E+00	-	1.0008E+04	1.2500E+00
1.4123E+02	2.1014E+03	1.8392E+00	-	2.6547E+05	9.2416E+00	-	9.5310E+03	1.6079E+00
1.4123E+02	2.0378E+03	3.2281E+00	-	2.5866E+05	2.2479E+01	-	9.0544E+03	2.2716E+01
1.4123E+02	1.9741E+03	1.0595E+01	-	2.4505E+05	8.3028E+00	-	8.5779E+03	1.5704E+01
1.4123E+02	1.9104E+03	4.2242E+01	-	2.3824E+05	1.7946E+00	-	8.1013E+03	1.4402E+01
1.4123E+02	1.8467E+03	1.0506E+01	-	2.3143E+05	3.1389E+00	-	7.6248E+03	3.7581E+01
1.4123E+02	1.7830E+03	4.7766E+01	-	2.2463E+05	2.0025E+01	-	7.1482E+03	9.6325E+01
1.4123E+02	1.7194E+03	1.1265E+01	-	2.1782E+05	1.2646E+01	-	6.6717E+03	1.4043E+03
1.4123E+02	1.6557E+03	4.3284E+01	-	2.1101E+05	3.4479E+01	-	6.1951E+03	4.1686E+02
1.4123E+02	1.5920E+03	3.1474E+01	-	2.0421E+05	1.2500E+00	-	5.7186E+03	1.0074E+03
1.4123E+02	1.5283E+03	6.9646E+01	-	1.9740E+05	4.4583E-02	-	5.2420E+03	7.5052E+03
1.4123E+02	1.4646E+03	1.2805E+02	-	1.9059E+05	2.5965E+01	-	4.7655E+03	2.5015E+03
1.4123E+02	1.4010E+03	2.1620E+02	-	1.8379E+05	1.1027E+01	-	4.2889E+03	1.6549E+04
1.4123E+02	1.3373E+03	1.5964E+02	-	1.7698E+05	1.8400E+00	-	3.8124E+03	5.4396E+04
1.4123E+02	1.2736E+03	2.6886E+02	-	1.7017E+05	2.7830E+00	-	3.3358E+03	3.8144E+04
1.4123E+02	1.2099E+03	3.2639E+02	-	1.6337E+05	2.3147E+00	-	2.8593E+03	7.7681E+04
1.4123E+02	1.1462E+03	3.4812E+02	-	1.5656E+05	1.8357E+00	-	2.3827E+03	1.1689E+05
1.4123E+02	1.0826E+03	3.1270E+02	-	1.4975E+05	5.2315E+01	-	1.9062E+03	1.5060E+05
1.4123E+02	1.0189E+03	4.4042E+02	-	1.4295E+05	1.9142E+02	-	1.4296E+03	1.1373E+05
1.4123E+02	9.5520E+02	5.1316E+02	-	1.3614E+05	3.5657E+02	-	9.5310E+02	3.4321E+05
1.4123E+02	8.9152E+02	2.4338E+03	-	1.2933E+05	5.0162E+01	-	4.7655E+02	7.8708E+05
1.4123E+02	8.2784E+02	1.1661E+03	-	1.2252E+05	6.7360E+02	-	0.0000E+00	1.8901E+06
1.4123E+02	7.6416E+02	9.7957E+03	-	1.1572E+05	5.4618E+02	-	2.1921E+04	4.4583E-02
1.4123E+02	7.0048E+02	1.0682E+04	-	1.0891E+05	3.6142E+03	-	2.1445E+04	4.1503E-02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.4123E+02	6.3680E+02	2.3396E+04	-	1.0210E+05	4.2564E+03	-	1.4296E+04	2.5446E+00
1.4123E+02	5.7312E+02	6.4512E+04	-	9.5297E+04	4.2847E+03	-	1.3820E+04	2.8536E-01
1.4123E+02	5.0944E+02	1.0226E+05	-	8.8490E+04	3.5258E+03	-	1.3343E+04	4.4583E-02
1.4123E+02	4.4576E+02	3.6596E+05	-	8.1683E+04	7.7315E+03	-	1.2867E+04	6.2500E-01
1.4123E+02	3.8208E+02	7.8625E+05	-	7.4876E+04	1.3970E+04	-	1.2390E+04	6.6443E-01
1.4123E+02	3.1840E+02	1.8474E+06	-	6.8069E+04	1.5284E+04	-	1.1914E+04	3.0943E+00
1.4123E+02	2.5472E+02	4.1300E+06	-	6.1262E+04	3.9766E+04	-	1.0008E+04	8.9167E-02
1.4123E+02	1.9104E+02	8.5985E+06	-	5.4455E+04	6.7226E+04	-	9.0544E+03	4.1474E-01
1.4123E+02	1.2736E+02	1.3331E+07	-	4.7648E+04	1.5449E+05	-	8.5779E+03	5.0756E+00
1.4123E+02	6.3680E+01	2.0493E+07	-	4.0841E+04	3.4023E+05	-	8.1013E+03	6.1887E+00
1.4123E+02	0.0000E+00	4.9719E+07	-	3.4035E+04	7.7068E+05	-	7.6248E+03	2.5999E+00
6.8554E+01	2.8656E+03	1.3443E+00	-	2.7228E+04	1.5367E+06	-	7.1482E+03	5.0408E+01
6.8554E+01	2.6109E+03	1.8392E+00	-	2.0421E+04	2.7095E+06	-	6.6717E+03	2.7779E+00
6.8554E+01	2.5472E+03	5.2531E+00	-	1.3614E+04	4.2316E+06	-	6.1951E+03	1.5920E+01
6.8554E+01	2.4198E+03	3.1389E+00	-	6.8069E+03	6.6671E+06	-	5.7186E+03	6.4567E+01
6.8554E+01	2.3561E+03	1.3375E-01	-	0.0000E+00	9.3993E+06	-	5.2420E+03	2.9417E+01
6.8554E+01	2.2925E+03	8.9167E-02	-	2.9270E+05	5.2085E+00	-	4.7655E+03	3.3731E+02
6.8554E+01	2.2288E+03	8.0333E-01	-	2.6547E+05	1.3443E+00	-	4.2889E+03	3.5809E+02
6.8554E+01	2.1651E+03	1.4781E+00	-	2.5866E+05	8.9674E+00	-	3.8124E+03	9.5647E+02
6.8554E+01	2.1014E+03	4.4583E-02	-	2.5186E+05	1.3443E+00	-	3.3358E+03	1.7682E+03
6.8554E+01	2.0378E+03	1.3375E-01	-	2.4505E+05	1.3443E+00	-	2.8593E+03	7.3428E+03
6.8554E+01	1.9741E+03	8.9167E-02	-	2.3824E+05	1.2167E+01	-	2.3827E+03	9.9342E+03
6.8554E+01	1.9104E+03	1.0551E+01	-	2.3143E+05	7.6230E+00	-	1.9062E+03	2.9463E+04
6.8554E+01	1.8467E+03	4.1696E+00	-	2.2463E+05	1.8792E+00	-	1.4296E+03	4.6599E+04
6.8554E+01	1.7830E+03	1.0729E+01	-	2.1782E+05	2.0307E+00	-	9.5310E+02	6.9118E+04
6.8554E+01	1.7194E+03	5.7871E+01	-	2.1101E+05	1.2904E+01	-	4.7655E+02	2.0421E+05
6.8554E+01	1.6557E+03	1.0595E+01	-	2.0421E+05	1.3526E+01	-	0.0000E+00	7.5000E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.8554E+01	1.5920E+03	2.0968E+01	-	1.9740E+05	4.0069E+01	-	1.4773E+04	6.2500E-01
6.8554E+01	1.5283E+03	1.1526E+01	-	1.9059E+05	1.4102E+01	-	1.4296E+04	6.2500E-01
6.8554E+01	1.4646E+03	2.4824E+01	-	1.8379E+05	4.8111E+00	-	1.3820E+04	6.6958E-01
6.8554E+01	1.4010E+03	5.3379E+01	-	1.7698E+05	2.2646E+00	-	9.0544E+03	8.9167E-02
6.8554E+01	1.3373E+03	5.0762E+01	-	1.7017E+05	6.7652E+00	-	8.5779E+03	8.5826E-01
6.8554E+01	1.2736E+03	6.0916E+01	-	1.6337E+05	1.0632E+02	-	7.6248E+03	1.4724E-01
6.8554E+01	1.2099E+03	1.0276E+02	-	1.5656E+05	1.0906E+01	-	7.1482E+03	3.2896E+00
6.8554E+01	1.1462E+03	8.5635E+01	-	1.4975E+05	2.8027E+02	-	6.6717E+03	3.2180E+00
6.8554E+01	1.0826E+03	1.7841E+02	-	1.4295E+05	1.3061E+02	-	6.1951E+03	6.1496E+00
6.8554E+01	1.0189E+03	2.2329E+02	-	1.3614E+05	5.3433E+02	-	5.7186E+03	4.3649E+01
6.8554E+01	9.5520E+02	2.3946E+02	-	1.2933E+05	1.0169E+03	-	5.2420E+03	1.6946E+02
6.8554E+01	8.9152E+02	2.1453E+02	-	1.2252E+05	7.9642E+03	-	4.7655E+03	5.6603E+01
6.8554E+01	8.2784E+02	1.1412E+04	-	1.1572E+05	4.3489E+03	-	4.2889E+03	1.0779E+02
6.8554E+01	7.6416E+02	5.1189E+03	-	1.0891E+05	1.4357E+03	-	3.8124E+03	2.0600E+02
6.8554E+01	7.0048E+02	3.2595E+03	-	1.0210E+05	7.9557E+03	-	3.3358E+03	2.1961E+02
6.8554E+01	6.3680E+02	3.8666E+04	-	9.5297E+04	1.8179E+04	-	2.8593E+03	3.1206E+01
6.8554E+01	5.7312E+02	2.5824E+04	-	8.8490E+04	2.0305E+04	-	2.3827E+03	2.3945E+02
6.8554E+01	5.0944E+02	7.2596E+04	-	8.1683E+04	3.0354E+04	-	1.9062E+03	4.1535E+02
6.8554E+01	4.4576E+02	1.3617E+05	-	7.4876E+04	3.9132E+04	-	1.4296E+03	7.0215E+03
6.8554E+01	3.8208E+02	3.3961E+05	-	6.8069E+04	3.1218E+04	-	9.5310E+02	3.9801E+03
6.8554E+01	3.1840E+02	7.7737E+05	-	6.1262E+04	4.9509E+04	-	4.7655E+02	4.1592E+04
6.8554E+01	2.5472E+02	1.6954E+06	-	5.4455E+04	7.9979E+04	-	0.0000E+00	1.6147E+05
6.8554E+01	1.9104E+02	2.9493E+06	-	4.7648E+04	8.6714E+04	-	2.3827E+04	4.4583E-02
6.8554E+01	1.2736E+02	4.5282E+06	-	4.0841E+04	3.2151E+05	-	2.2874E+04	4.4583E-02
6.8554E+01	6.3680E+01	9.2332E+06	-	3.4035E+04	7.6757E+05	-	1.8585E+04	4.4583E-02
6.8554E+01	0.0000E+00	2.9391E+07	-	2.7228E+04	1.6573E+06	-	1.7632E+04	4.4583E-02
-	3.0566E+03	1.7500E+00	-	2.0421E+04	3.0380E+06	-	1.6203E+04	4.1583E-02
4.1233E+00			-			-		

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
4.1233E+00	2.8019E+03	1.7500E+00	5.9300E+04	1.3614E+04	4.8058E+06	6.3122E+03	9.0544E+03	8.9167E-02
-			-			-		
4.1233E+00	2.6109E+03	3.5000E+00	5.9300E+04	6.8069E+03	6.9395E+06	6.3122E+03	8.5779E+03	2.3641E-01
-			-			-		
4.1233E+00	2.5472E+03	1.7500E+00	5.9300E+04	0.0000E+00	1.0052E+07	6.3122E+03	8.1013E+03	4.7436E+01
-			-			-		
4.1233E+00	2.4835E+03	6.2500E-01	6.7165E+04	2.5186E+05	1.9693E+00	6.3122E+03	7.6248E+03	8.9167E-02
-			-			-		
4.1233E+00	2.4198E+03	4.4583E-02	6.7165E+04	2.4505E+05	3.0943E+00	6.3122E+03	7.1482E+03	2.6600E+01
-			-			-		
4.1233E+00	2.2925E+03	4.4583E-02	6.7165E+04	2.3824E+05	7.0044E+00	6.3122E+03	6.6717E+03	9.0741E+00
-			-			-		
4.1233E+00	1.9741E+03	4.4583E-02	6.7165E+04	2.3143E+05	2.8300E+00	6.3122E+03	6.1951E+03	6.0370E+00
-			-			-		
4.1233E+00	1.7830E+03	3.6338E+00	6.7165E+04	2.2463E+05	2.6887E+00	6.3122E+03	5.7186E+03	1.7149E+02
-			-			-		
4.1233E+00	1.7194E+03	4.4583E-02	6.7165E+04	2.1782E+05	5.3774E+00	6.3122E+03	5.2420E+03	3.9612E+01
-			-			-		
4.1233E+00	1.6557E+03	1.7833E-01	6.7165E+04	2.1101E+05	7.7337E+00	6.3122E+03	4.7655E+03	2.0225E+02
-			-			-		
4.1233E+00	1.5920E+03	7.7568E+00	6.7165E+04	2.0421E+05	1.4109E+00	6.3122E+03	4.2889E+03	1.2408E+01
-			-			-		
4.1233E+00	1.5283E+03	1.2512E+01	6.7165E+04	1.9740E+05	8.9017E+00	6.3122E+03	3.8124E+03	1.7789E+01
-			-			-		
4.1233E+00	1.4646E+03	1.4506E+01	6.7165E+04	1.9059E+05	4.6429E+01	6.3122E+03	2.8593E+03	4.3256E+01
-			-			-		
4.1233E+00	1.4010E+03	2.5088E+00	6.7165E+04	1.8379E+05	4.2426E+01	6.3122E+03	2.3827E+03	3.6395E+01
-			-			-		
4.1233E+00	1.3373E+03	2.7846E+01	6.7165E+04	1.7698E+05	4.6515E+01	6.3122E+03	1.9062E+03	1.7141E+01
-			-			-		
4.1233E+00	1.2736E+03	1.3685E+01	6.7165E+04	1.7017E+05	3.0845E+01	6.3122E+03	1.4296E+03	5.1252E+01
-			-			-		
4.1233E+00	1.2099E+03	3.4905E+01	6.7165E+04	1.6337E+05	2.5265E+02	6.3122E+03	9.5310E+02	3.4404E+02
-			-			-		
4.1233E+00	1.1462E+03	4.0879E+01	6.7165E+04	1.5656E+05	2.2076E+02	6.3122E+03	4.7655E+02	8.4782E+02
-			-			-		
4.1233E+00	1.0826E+03	5.1563E+01	6.7165E+04	1.4975E+05	6.0993E+02	6.3122E+03	0.0000E+00	1.7315E+04
-			-			-		
4.1233E+00	1.0189E+03	4.8705E+01	6.7165E+04	1.4295E+05	3.3678E+02	6.9411E+03	1.6679E+04	4.4583E-02
-			-			-		
4.1233E+00	9.5520E+02	6.2231E+01	6.7165E+04	1.3614E+05	7.2432E+02	6.9411E+03	1.4773E+04	1.3443E+00
-			-			-		
4.1233E+00	8.9152E+02	1.1490E+02	6.7165E+04	1.2933E+05	3.3720E+03	6.9411E+03	1.1914E+04	8.9167E-02
-			-			-		
4.1233E+00	8.2784E+02	1.0536E+04	6.7165E+04	1.2252E+05	7.3855E+03	6.9411E+03	8.5779E+03	1.7961E+01
-			-			-		
4.1233E+00	7.6416E+02	3.1191E+04	6.7165E+04	1.1572E+05	4.6950E+03	6.9411E+03	8.1013E+03	1.7340E+00
-			-			-		
4.1233E+00	7.0048E+02	8.8262E+04	6.7165E+04	1.0891E+05	1.0394E+04	6.9411E+03	7.1482E+03	4.8156E-01
-			-			-		
4.1233E+00	6.3680E+02	6.0713E+04	6.7165E+04	1.0210E+05	1.2977E+04	6.9411E+03	6.6717E+03	4.1346E+00
-			-			-		
4.1233E+00	5.7312E+02	1.5720E+05	6.7165E+04	9.5297E+04	2.3628E+04	6.9411E+03	6.1951E+03	1.7804E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
4.1233E+00	5.0944E+02	9.0007E+04	6.7165E+04	8.8490E+04	2.0986E+04	6.9411E+03	5.7186E+03	1.3000E+00
-			-			-		
4.1233E+00	4.4576E+02	1.4197E+05	6.7165E+04	8.1683E+04	2.7481E+04	6.9411E+03	4.7655E+03	2.4189E+01
-			-			-		
4.1233E+00	3.8208E+02	2.4130E+05	6.7165E+04	7.4876E+04	3.7784E+04	6.9411E+03	4.2889E+03	4.7500E+00
-			-			-		
4.1233E+00	3.1840E+02	4.0554E+05	6.7165E+04	6.8069E+04	4.2947E+04	6.9411E+03	3.8124E+03	5.7425E+00
-			-			-		
4.1233E+00	2.5472E+02	7.5111E+05	6.7165E+04	6.1262E+04	4.7671E+04	6.9411E+03	3.3358E+03	5.0646E+01
-			-			-		
4.1233E+00	1.9104E+02	1.9076E+06	6.7165E+04	5.4455E+04	8.8536E+04	6.9411E+03	2.8593E+03	3.9007E+01
-			-			-		
4.1233E+00	1.2736E+02	4.6326E+06	6.7165E+04	4.7648E+04	1.4128E+05	6.9411E+03	2.3827E+03	5.1920E+00
-			-			-		
4.1233E+00	6.3680E+01	1.1388E+07	6.7165E+04	4.0841E+04	2.1765E+05	6.9411E+03	1.9062E+03	2.0264E+02
-			-			-		
4.1233E+00	0.0000E+00	2.9994E+07	6.7165E+04	3.4035E+04	4.3779E+05	6.9411E+03	1.4296E+03	1.0551E+01
-			-			-		
7.6801E+01	2.2925E+03	4.4583E-02	6.7165E+04	2.7228E+04	1.3649E+06	6.9411E+03	9.5310E+02	2.5263E+02
-			-			-		
7.6801E+01	2.2288E+03	1.3443E+00	6.7165E+04	2.0421E+04	2.5227E+06	6.9411E+03	4.7655E+02	1.3316E+03
-			-			-		
7.6801E+01	2.1651E+03	6.6958E-01	6.7165E+04	1.3614E+04	4.0276E+06	6.9411E+03	0.0000E+00	1.1050E+04
-			-			-		
7.6801E+01	2.0378E+03	4.4583E-02	6.7165E+04	6.8069E+03	5.4423E+06	7.5701E+03	8.5779E+03	2.7779E+00
-			-			-		
7.6801E+01	1.9104E+03	3.5446E+00	6.7165E+04	0.0000E+00	1.1868E+07	7.5701E+03	8.1013E+03	1.2500E+00
-			-			-		
7.6801E+01	1.7830E+03	4.4583E-02	7.5031E+04	2.4505E+05	5.2085E+00	7.5701E+03	7.6248E+03	1.2500E+00
-			-			-		
7.6801E+01	1.7194E+03	1.7500E+00	7.5031E+04	2.3143E+05	1.3443E+00	7.5701E+03	7.1482E+03	1.6941E+02
-			-			-		
7.6801E+01	1.6557E+03	3.5000E+00	7.5031E+04	2.2463E+05	2.8300E+00	7.5701E+03	6.6717E+03	1.6971E+00
-			-			-		
7.6801E+01	1.5920E+03	1.1125E+01	7.5031E+04	2.1782E+05	1.0115E+01	7.5701E+03	5.7186E+03	8.9167E-02
-			-			-		
7.6801E+01	1.5283E+03	8.3889E+00	7.5031E+04	2.1101E+05	7.6230E+00	7.5701E+03	4.7655E+03	3.5000E+00
-			-			-		
7.6801E+01	1.4646E+03	1.5242E+01	7.5031E+04	2.0421E+05	3.0582E+01	7.5701E+03	4.2889E+03	2.6887E+00
-			-			-		
7.6801E+01	1.4010E+03	2.0585E+01	7.5031E+04	1.9740E+05	7.0093E+00	7.5701E+03	3.8124E+03	1.2239E+01
-			-			-		
7.6801E+01	1.3373E+03	7.3531E+00	7.5031E+04	1.9059E+05	2.0844E+01	7.5701E+03	3.3358E+03	2.1582E+00
-			-			-		
7.6801E+01	1.2736E+03	1.1423E+01	7.5031E+04	1.8379E+05	1.6448E+00	7.5701E+03	2.8593E+03	2.7116E+01
-			-			-		
7.6801E+01	1.2099E+03	1.9620E+01	7.5031E+04	1.7698E+05	3.5340E+01	7.5701E+03	2.3827E+03	1.4424E+01
-			-			-		
7.6801E+01	1.1462E+03	2.6428E+01	7.5031E+04	1.7017E+05	1.4424E+02	7.5701E+03	1.9062E+03	2.8235E+01
-			-			-		
7.6801E+01	1.0826E+03	4.2092E+01	7.5031E+04	1.6337E+05	2.5932E+02	7.5701E+03	1.4296E+03	4.9180E+00
-			-			-		
7.6801E+01	1.0189E+03	6.1575E+01	7.5031E+04	1.5656E+05	3.1091E+02	7.5701E+03	9.5310E+02	5.0835E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
7.6801E+01	9.5520E+02	1.0340E+02	7.5031E+04	1.4975E+05	6.3277E+02	7.5701E+03	4.7655E+02	2.0708E+02
-			-			-		
7.6801E+01	8.9152E+02	1.2485E+02	7.5031E+04	1.4295E+05	3.4606E+03	7.5701E+03	0.0000E+00	5.1910E+02
-			-			-		
7.6801E+01	8.2784E+02	1.2601E+02	7.5031E+04	1.3614E+05	1.8799E+03	8.1991E+03	2.0492E+04	4.4583E-02
-			-			-		
7.6801E+01	7.6416E+02	1.8158E+02	7.5031E+04	1.2933E+05	3.1807E+03	8.1991E+03	1.9538E+04	4.4583E-02
-			-			-		
7.6801E+01	7.0048E+02	1.0579E+04	7.5031E+04	1.2252E+05	3.2715E+03	8.1991E+03	8.1013E+03	8.9167E-02
-			-			-		
7.6801E+01	6.3680E+02	2.2939E+02	7.5031E+04	1.1572E+05	8.6880E+03	8.1991E+03	7.6248E+03	1.2500E+00
-			-			-		
7.6801E+01	5.7312E+02	3.1921E+02	7.5031E+04	1.0891E+05	1.3467E+04	8.1991E+03	6.6717E+03	1.4724E-01
-			-			-		
7.6801E+01	5.0944E+02	7.3524E+03	7.5031E+04	1.0210E+05	1.5076E+04	8.1991E+03	6.1951E+03	2.6887E+00
-			-			-		
7.6801E+01	4.4576E+02	1.8113E+04	7.5031E+04	9.5297E+04	2.3481E+04	8.1991E+03	5.7186E+03	8.9167E-02
-			-			-		
7.6801E+01	3.8208E+02	4.3397E+03	7.5031E+04	8.8490E+04	4.8142E+04	8.1991E+03	5.2420E+03	1.2500E+00
-			-			-		
7.6801E+01	3.1840E+02	1.6818E+04	7.5031E+04	8.1683E+04	6.0249E+04	8.1991E+03	4.7655E+03	9.3722E+00
-			-			-		
7.6801E+01	2.5472E+02	8.4499E+03	7.5031E+04	7.4876E+04	7.5967E+04	8.1991E+03	4.2889E+03	8.0362E+00
-			-			-		
7.6801E+01	1.9104E+02	7.7550E+04	7.5031E+04	6.8069E+04	1.2939E+05	8.1991E+03	3.8124E+03	1.0672E+01
-			-			-		
7.6801E+01	1.2736E+02	2.9902E+05	7.5031E+04	6.1262E+04	1.6032E+05	8.1991E+03	3.3358E+03	3.9387E+00
-			-			-		
7.6801E+01	6.3680E+01	1.5117E+06	7.5031E+04	5.4455E+04	2.4583E+05	8.1991E+03	2.3827E+03	2.0980E+00
-			-			-		
7.6801E+01	0.0000E+00	5.1149E+06	7.5031E+04	4.7648E+04	2.8738E+05	8.1991E+03	1.9062E+03	7.7524E+00
-			-			-		
1.4948E+02	2.1651E+03	4.4583E-02	7.5031E+04	4.0841E+04	4.0628E+05	8.1991E+03	1.4296E+03	1.6079E+00
-			-			-		
1.4948E+02	2.0378E+03	3.5000E+00	7.5031E+04	3.4035E+04	6.7794E+05	8.1991E+03	9.5310E+02	2.3487E+01
-			-			-		
1.4948E+02	1.9741E+03	3.5000E+00	7.5031E+04	2.7228E+04	1.3362E+06	8.1991E+03	4.7655E+02	4.5052E+01
-			-			-		
1.4948E+02	1.9104E+03	8.9167E-02	7.5031E+04	2.0421E+04	3.1099E+06	8.1991E+03	0.0000E+00	7.5278E+01
-			-			-		
1.4948E+02	1.7194E+03	1.7500E+00	7.5031E+04	1.3614E+04	4.4448E+06	8.8280E+03	1.1437E+04	8.9167E-02
-			-			-		
1.4948E+02	1.6557E+03	9.6389E+00	7.5031E+04	6.8069E+03	5.6653E+06	8.8280E+03	3.3358E+03	2.5553E+00
-			-			-		
1.4948E+02	1.5920E+03	6.5943E+00	7.5031E+04	0.0000E+00	1.5357E+07	8.8280E+03	1.9062E+03	2.3641E-01
-			-			-		
1.4948E+02	1.5283E+03	8.5673E+00	8.2897E+04	1.9059E+05	3.4681E+02	8.8280E+03	9.5310E+02	8.9167E-02
-			-			-		
1.4948E+02	1.4646E+03	1.3594E+01	8.2897E+04	1.8379E+05	7.1659E+02	8.8280E+03	4.7655E+02	1.5844E+01
-			-			-		
1.4948E+02	1.4010E+03	4.4335E+00	8.2897E+04	1.7698E+05	6.1493E+01	8.8280E+03	0.0000E+00	3.8226E+02
-			-			-		
1.4948E+02	1.3373E+03	1.6189E+01	8.2897E+04	1.7017E+05	4.8219E+00	9.4570E+03	3.3358E+05	1.2500E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
1.4948E+02	1.2736E+03	7.0000E+00	8.2897E+04	1.6337E+05	1.5996E+02	9.4570E+03	2.8593E+03	2.6887E+00
-			-			-		
1.4948E+02	1.2099E+03	2.6961E+01	8.2897E+04	1.5656E+05	2.0225E+03	9.4570E+03	1.9062E+03	1.0055E+00
-			-			-		
1.4948E+02	1.1462E+03	3.7720E+01	8.2897E+04	1.4975E+05	4.1766E+03	9.4570E+03	9.5310E+02	8.5826E-01
-			-			-		
1.4948E+02	1.0826E+03	4.3673E+01	8.2897E+04	1.4295E+05	1.5665E+03	9.4570E+03	4.7655E+02	2.7316E+01
-			-			-		
1.4948E+02	1.0189E+03	2.8617E+01	8.2897E+04	1.3614E+05	2.8911E+03	9.4570E+03	0.0000E+00	1.6691E+01
-			-			-		
1.4948E+02	9.5520E+02	1.0103E+02	8.2897E+04	1.2933E+05	3.1105E+03	1.0086E+04	4.7655E+02	6.4049E+00
-			-			-		
1.4948E+02	8.9152E+02	5.8000E+01	8.2897E+04	1.2252E+05	1.0124E+04	1.0086E+04	0.0000E+00	1.3147E+01
-			-			-		
1.4948E+02	8.2784E+02	5.6970E+01	8.2897E+04	1.1572E+05	1.7409E+04	1.0715E+04	9.5310E+02	8.9167E-02
-			-			-		
1.4948E+02	7.6416E+02	7.9397E+01	8.2897E+04	1.0891E+05	3.2258E+04	1.0715E+04	0.0000E+00	1.5756E+00
-			-			-		
1.4948E+02	7.0048E+02	7.8410E+01	8.2897E+04	1.0210E+05	4.2577E+04	1.1344E+04	4.7655E+03	8.9167E-02
-			-			-		
1.4948E+02	6.3680E+02	7.7171E+01	8.2897E+04	9.5297E+04	6.1609E+04	1.1344E+04	0.0000E+00	2.6472E+00
-			-			-		
1.4948E+02	5.7312E+02	1.7290E+02	8.2897E+04	8.8490E+04	8.9154E+04	1.1973E+04	9.5310E+02	8.9167E-02
-			-			-		
1.4948E+02	5.0944E+02	1.8725E+02	8.2897E+04	8.1683E+04	1.4298E+05	1.1973E+04	4.7655E+02	8.9167E-02
-			-					
1.4948E+02	4.4576E+02	2.4850E+02	8.2897E+04	7.4876E+04	2.0512E+05			
-			-					
1.4948E+02	3.8208E+02	3.8519E+03	8.2897E+04	6.8069E+04	3.0655E+05			
-			-					
1.4948E+02	3.1840E+02	3.5447E+03	8.2897E+04	6.1262E+04	3.9702E+05			
-			-					
1.4948E+02	2.5472E+02	3.9241E+03	8.2897E+04	5.4455E+04	5.1779E+05			
-			-					
1.4948E+02	1.9104E+02	2.8269E+04	8.2897E+04	4.7648E+04	7.3989E+05			
-			-					
1.4948E+02	1.2736E+02	1.4605E+05	8.2897E+04	4.0841E+04	9.0047E+05			
-			-					
1.4948E+02	6.3680E+01	2.1436E+05	8.2897E+04	3.4035E+04	1.2533E+06			
-			-					
1.4948E+02	0.0000E+00	6.1502E+05	8.2897E+04	2.7228E+04	1.8647E+06			
-			-					
2.2216E+02	2.0378E+03	2.3750E+00	8.2897E+04	2.0421E+04	3.2756E+06			
-			-					
2.2216E+02	1.9104E+03	1.7500E+00	8.2897E+04	1.3614E+04	3.8678E+06			
-			-					
2.2216E+02	1.8467E+03	1.3443E+00	8.2897E+04	6.8069E+03	5.1151E+06			
-			-					
2.2216E+02	1.7830E+03	7.0000E+00	8.2897E+04	0.0000E+00	1.5205E+07			
-			-					
2.2216E+02	1.7194E+03	3.5000E+00	9.0762E+04	2.0421E+05	5.6478E+02			
-			-					
2.2216E+02	1.6557E+03	5.2500E+00	9.0762E+04	1.9740E+05	7.7064E+02			



Document:
0122-8671 VER 00Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90APage
74/282**Markov Matrices**

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.2216E+02	1.5920E+03	1.3443E+00	9.0762E+04	1.9059E+05	7.5905E+02			
-			-					
2.2216E+02	1.5283E+03	8.3889E+00	9.0762E+04	1.7698E+05	2.4341E+03			
-			-					
2.2216E+02	1.4646E+03	4.8443E+00	9.0762E+04	1.7017E+05	2.1853E+01			
-			-					
2.2216E+02	1.4010E+03	8.7500E+00	9.0762E+04	1.6337E+05	3.6345E+03			
-			-					
2.2216E+02	1.3373E+03	1.1844E+01	9.0762E+04	1.5656E+05	1.7846E+03			
-			-					
2.2216E+02	1.2736E+03	2.3500E+01	9.0762E+04	1.4975E+05	1.8302E+03			
-			-					
2.2216E+02	1.2099E+03	2.0594E+01	9.0762E+04	1.4295E+05	6.8122E+03			
-			-					
2.2216E+02	1.1462E+03	1.2783E+01	9.0762E+04	1.3614E+05	6.2428E+03			
-			-					
2.2216E+02	1.0826E+03	1.9283E+01	9.0762E+04	1.2933E+05	9.0243E+03			
-			-					
2.2216E+02	1.0189E+03	1.8439E+01	9.0762E+04	1.2252E+05	1.1625E+04			
-			-					
2.2216E+02	9.5520E+02	2.0189E+01	9.0762E+04	1.1572E+05	2.3214E+04			
-			-					
2.2216E+02	8.9152E+02	1.1934E+01	9.0762E+04	1.0891E+05	4.8559E+04			
-			-					
2.2216E+02	8.2784E+02	2.9816E+01	9.0762E+04	1.0210E+05	5.8217E+04			
-			-					
2.2216E+02	7.6416E+02	2.5655E+01	9.0762E+04	9.5297E+04	1.1481E+05			
-			-					
2.2216E+02	7.0048E+02	2.6467E+01	9.0762E+04	8.8490E+04	1.4970E+05			
-			-					
2.2216E+02	6.3680E+02	1.2377E+01	9.0762E+04	8.1683E+04	2.0558E+05			
-			-					
2.2216E+02	5.7312E+02	5.2661E+01	9.0762E+04	7.4876E+04	3.3776E+05			
-			-					
2.2216E+02	5.0944E+02	4.4033E+01	9.0762E+04	6.8069E+04	4.9277E+05			
-			-					
2.2216E+02	4.4576E+02	3.8111E+01	9.0762E+04	6.1262E+04	6.4034E+05			
-			-					
2.2216E+02	3.8208E+02	7.7101E+01	9.0762E+04	5.4455E+04	9.1189E+05			
-			-					
2.2216E+02	3.1840E+02	6.9038E+01	9.0762E+04	4.7648E+04	1.3709E+06			
-			-					
2.2216E+02	2.5472E+02	1.1013E+02	9.0762E+04	4.0841E+04	1.7433E+06			
-			-					
2.2216E+02	1.9104E+02	2.0891E+04	9.0762E+04	3.4035E+04	2.3974E+06			
-			-					
2.2216E+02	1.2736E+02	4.0870E+02	9.0762E+04	2.7228E+04	2.8364E+06			
-			-					
2.2216E+02	6.3680E+01	6.3083E+04	9.0762E+04	2.0421E+04	3.4860E+06			
-			-					
2.2216E+02	0.0000E+00	1.4003E+05	9.0762E+04	1.3614E+04	3.4350E+06			
-			-					
2.9483E+02	2.2288E+03	1.7500E+00	9.0762E+04	6.8069E+03	4.0772E+06			



DNV Denmark A/S
Tuborg Parkvej 8, 2.
DK-2900 Hellerup
VAT No. DK9832314

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.9483E+02	2.0378E+03	1.7500E+00	9.0762E+04	0.0000E+00	1.2077E+07			
-			-					
2.9483E+02	1.9741E+03	3.5000E+00	9.8628E+04	1.8379E+05	5.6000E+02			
-			-					
2.9483E+02	1.9104E+03	3.5000E+00	9.8628E+04	1.7698E+05	2.9400E+02			
-			-					
2.9483E+02	1.6557E+03	4.1250E+00	9.8628E+04	1.7017E+05	2.7075E+03			
-			-					
2.9483E+02	1.5920E+03	4.8443E+00	9.8628E+04	1.6337E+05	3.0009E+03			
-			-					
2.9483E+02	1.5283E+03	1.1252E+01	9.8628E+04	1.5656E+05	4.1078E+03			
-			-					
2.9483E+02	1.4646E+03	4.0331E+00	9.8628E+04	1.4975E+05	3.8836E+03			
-			-					
2.9483E+02	1.4010E+03	6.1887E+00	9.8628E+04	1.4295E+05	4.7708E+03			
-			-					
2.9483E+02	1.3373E+03	1.7500E+00	9.8628E+04	1.3614E+05	1.0323E+04			
-			-					
2.9483E+02	1.2736E+03	6.1887E+00	9.8628E+04	1.2933E+05	1.5748E+04			
-			-					
2.9483E+02	1.2099E+03	9.6887E+00	9.8628E+04	1.2252E+05	2.5732E+04			
-			-					
2.9483E+02	1.1462E+03	1.0094E+01	9.8628E+04	1.1572E+05	3.3721E+04			
-			-					
2.9483E+02	1.0826E+03	1.1844E+01	9.8628E+04	1.0891E+05	6.1207E+04			
-			-					
2.9483E+02	1.0189E+03	1.0500E+01	9.8628E+04	1.0210E+05	7.0963E+04			
-			-					
2.9483E+02	9.5520E+02	7.4387E+00	9.8628E+04	9.5297E+04	1.1963E+05			
-			-					
2.9483E+02	8.9152E+02	3.5983E+01	9.8628E+04	8.8490E+04	1.9821E+05			
-			-					
2.9483E+02	8.2784E+02	1.3278E+01	9.8628E+04	8.1683E+04	2.8078E+05			
-			-					
2.9483E+02	7.6416E+02	1.6689E+01	9.8628E+04	7.4876E+04	4.5753E+05			
-			-					
2.9483E+02	7.0048E+02	1.1655E+01	9.8628E+04	6.8069E+04	6.1706E+05			
-			-					
2.9483E+02	6.3680E+02	1.6306E+01	9.8628E+04	6.1262E+04	1.0145E+06			
-			-					
2.9483E+02	5.7312E+02	2.1344E+01	9.8628E+04	5.4455E+04	1.4255E+06			
-			-					
2.9483E+02	5.0944E+02	2.0533E+01	9.8628E+04	4.7648E+04	1.9360E+06			
-			-					
2.9483E+02	4.4576E+02	5.2636E+01	9.8628E+04	4.0841E+04	2.7262E+06			
-			-					
2.9483E+02	3.8208E+02	5.1400E+01	9.8628E+04	3.4035E+04	3.6166E+06			
-			-					
2.9483E+02	3.1840E+02	3.0221E+01	9.8628E+04	2.7228E+04	4.1069E+06			
-			-					
2.9483E+02	2.5472E+02	3.5961E+01	9.8628E+04	2.0421E+04	4.3294E+06			
-			-					
2.9483E+02	1.9104E+02	4.2694E+01	9.8628E+04	1.3614E+04	4.3226E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.9483E+02	1.2736E+02	6.9246E+01	9.8628E+04	6.8069E+03	3.9433E+06			
-			-					
2.9483E+02	6.3680E+01	5.2353E+02	9.8628E+04	0.0000E+00	1.1431E+07			
-			-					
2.9483E+02	0.0000E+00	7.4114E+04	1.0649E+05	1.9740E+05	6.9068E+02			
-			-					
3.6751E+02	2.2925E+03	1.7500E+00	1.0649E+05	1.8379E+05	9.7782E+02			
-			-					
3.6751E+02	2.1014E+03	5.2500E+00	1.0649E+05	1.7698E+05	5.6000E+02			
-			-					
3.6751E+02	1.9104E+03	1.7500E+00	1.0649E+05	1.7017E+05	1.2901E+03			
-			-					
3.6751E+02	1.7194E+03	1.7500E+00	1.0649E+05	1.6337E+05	1.8083E+03			
-			-					
3.6751E+02	1.5920E+03	6.5943E+00	1.0649E+05	1.5656E+05	3.5429E+03			
-			-					
3.6751E+02	1.5283E+03	3.0000E+00	1.0649E+05	1.4975E+05	4.9610E+03			
-			-					
3.6751E+02	1.4646E+03	4.3443E+00	1.0649E+05	1.4295E+05	1.2843E+04			
-			-					
3.6751E+02	1.4010E+03	4.8443E+00	1.0649E+05	1.3614E+05	2.0131E+04			
-			-					
3.6751E+02	1.3373E+03	1.7500E+00	1.0649E+05	1.2933E+05	2.2631E+04			
-			-					
3.6751E+02	1.2736E+03	1.7500E+00	1.0649E+05	1.2252E+05	2.6718E+04			
-			-					
3.6751E+02	1.2099E+03	1.3443E+00	1.0649E+05	1.1572E+05	3.5725E+04			
-			-					
3.6751E+02	1.1462E+03	1.3722E+01	1.0649E+05	1.0891E+05	6.3283E+04			
-			-					
3.6751E+02	1.0826E+03	5.2500E+00	1.0649E+05	1.0210E+05	8.9669E+04			
-			-					
3.6751E+02	1.0189E+03	9.6887E+00	1.0649E+05	9.5297E+04	1.4273E+05			
-			-					
3.6751E+02	8.9152E+02	1.4000E+01	1.0649E+05	8.8490E+04	2.1331E+05			
-			-					
3.6751E+02	8.2784E+02	6.2779E+00	1.0649E+05	8.1683E+04	3.5265E+05			
-			-					
3.6751E+02	7.6416E+02	1.1655E+01	1.0649E+05	7.4876E+04	5.3590E+05			
-			-					
3.6751E+02	7.0048E+02	9.6887E+00	1.0649E+05	6.8069E+04	7.7021E+05			
-			-					
3.6751E+02	6.3680E+02	1.0595E+01	1.0649E+05	6.1262E+04	1.1463E+06			
-			-					
3.6751E+02	5.7312E+02	2.5744E+01	1.0649E+05	5.4455E+04	1.7301E+06			
-			-					
3.6751E+02	5.0944E+02	1.9473E+01	1.0649E+05	4.7648E+04	2.6505E+06			
-			-					
3.6751E+02	4.4576E+02	2.5188E+01	1.0649E+05	4.0841E+04	3.3917E+06			
-			-					
3.6751E+02	3.8208E+02	1.6132E+01	1.0649E+05	3.4035E+04	4.1416E+06			
-			-					
3.6751E+02	3.1840E+02	2.5821E+01	1.0649E+05	2.7228E+04	5.4774E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.6751E+02	2.5472E+02	3.3887E+01	1.0649E+05	2.0421E+04	5.3562E+06			
-			-					
3.6751E+02	1.9104E+02	3.5448E+01	1.0649E+05	1.3614E+04	4.3114E+06			
-			-					
3.6751E+02	1.2736E+02	3.8326E+01	1.0649E+05	6.8069E+03	4.1723E+06			
-			-					
3.6751E+02	6.3680E+01	2.1151E+02	1.0649E+05	0.0000E+00	1.1180E+07			
-			-					
3.6751E+02	0.0000E+00	2.1868E+04	1.1436E+05	2.1782E+05	2.7993E+01			
-			-					
4.4019E+02	1.4646E+03	1.3443E+00	1.1436E+05	1.7698E+05	6.1615E+02			
-			-					
4.4019E+02	1.2099E+03	2.6887E+00	1.1436E+05	1.7017E+05	8.4561E+02			
-			-					
4.4019E+02	1.1462E+03	1.0417E+01	1.1436E+05	1.6337E+05	1.7509E+03			
-			-					
4.4019E+02	1.0826E+03	1.0500E+01	1.1436E+05	1.5656E+05	6.7658E+03			
-			-					
4.4019E+02	1.0189E+03	2.6887E+00	1.1436E+05	1.4975E+05	8.8204E+03			
-			-					
4.4019E+02	8.9152E+02	2.0834E+01	1.1436E+05	1.4295E+05	1.1897E+04			
-			-					
4.4019E+02	8.2784E+02	1.0500E+01	1.1436E+05	1.3614E+05	2.4418E+04			
-			-					
4.4019E+02	7.6416E+02	9.6887E+00	1.1436E+05	1.2933E+05	1.8758E+04			
-			-					
4.4019E+02	7.0048E+02	6.1887E+00	1.1436E+05	1.2252E+05	3.4681E+04			
-			-					
4.4019E+02	6.3680E+02	2.5483E+01	1.1436E+05	1.1572E+05	6.2773E+04			
-			-					
4.4019E+02	5.7312E+02	1.4255E+01	1.1436E+05	1.0891E+05	7.8875E+04			
-			-					
4.4019E+02	5.0944E+02	3.5000E+00	1.1436E+05	1.0210E+05	1.2146E+05			
-			-					
4.4019E+02	4.4576E+02	1.5155E+01	1.1436E+05	9.5297E+04	1.8581E+05			
-			-					
4.4019E+02	3.8208E+02	2.1261E+01	1.1436E+05	8.8490E+04	2.8462E+05			
-			-					
4.4019E+02	3.1840E+02	1.0755E+01	1.1436E+05	8.1683E+04	3.9876E+05			
-			-					
4.4019E+02	2.5472E+02	1.2377E+01	1.1436E+05	7.4876E+04	5.3816E+05			
-			-					
4.4019E+02	1.9104E+02	4.7171E+01	1.1436E+05	6.8069E+04	8.5317E+05			
-			-					
4.4019E+02	1.2736E+02	4.0804E+01	1.1436E+05	6.1262E+04	1.4148E+06			
-			-					
4.4019E+02	6.3680E+01	1.0790E+02	1.1436E+05	5.4455E+04	1.9276E+06			
-			-					
4.4019E+02	0.0000E+00	2.6189E+02	1.1436E+05	4.7648E+04	2.9568E+06			
-			-					
5.1287E+02	1.7194E+03	1.3443E+00	1.1436E+05	4.0841E+04	3.8824E+06			
-			-					
5.1287E+02	8.2784E+02	7.0000E+00	1.1436E+05	3.4035E+04	4.7622E+06			



Document:
0122-8671 VER 00Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90APage
78/282

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
5.1287E+02	7.6416E+02	2.6887E+00	1.1436E+05	2.7228E+04	5.5534E+06			
-			-					
5.1287E+02	7.0048E+02	2.6887E+00	1.1436E+05	2.0421E+04	5.2356E+06			
-			-					
5.1287E+02	5.7312E+02	3.5000E+00	1.1436E+05	1.3614E+04	4.9837E+06			
-			-					
5.1287E+02	5.0944E+02	6.6274E+00	1.1436E+05	6.8069E+03	3.9716E+06			
-			-					
5.1287E+02	4.4576E+02	8.9666E+00	1.1436E+05	0.0000E+00	1.2126E+07			
-			-					
5.1287E+02	3.8208E+02	8.1553E+00	1.2222E+05	1.7698E+05	5.6000E+02			
-			-					
5.1287E+02	3.1840E+02	8.0661E+00	1.2222E+05	1.7017E+05	1.1200E+03			
-			-					
5.1287E+02	2.5472E+02	1.7755E+01	1.2222E+05	1.6337E+05	6.2150E+02			
-			-					
5.1287E+02	1.9104E+02	1.9721E+01	1.2222E+05	1.5656E+05	2.1475E+03			
-			-					
5.1287E+02	1.2736E+02	2.4287E+01	1.2222E+05	1.4975E+05	2.7056E+03			
-			-					
5.1287E+02	6.3680E+01	4.2596E+01	1.2222E+05	1.4295E+05	9.6368E+03			
-			-					
5.1287E+02	0.0000E+00	1.6768E+02	1.2222E+05	1.3614E+05	1.3250E+04			
-			-					
5.8554E+02	1.6557E+03	3.5000E+00	1.2222E+05	1.2933E+05	2.9928E+04			
-			-					
5.8554E+02	1.2736E+03	3.5000E+00	1.2222E+05	1.2252E+05	3.3464E+04			
-			-					
5.8554E+02	6.3680E+02	3.5000E+00	1.2222E+05	1.1572E+05	6.2536E+04			
-			-					
5.8554E+02	5.7312E+02	5.3774E+00	1.2222E+05	1.0891E+05	1.1385E+05			
-			-					
5.8554E+02	5.0944E+02	2.6887E+00	1.2222E+05	1.0210E+05	1.3003E+05			
-			-					
5.8554E+02	3.8208E+02	2.6887E+00	1.2222E+05	9.5297E+04	2.2667E+05			
-			-					
5.8554E+02	3.1840E+02	1.3443E+01	1.2222E+05	8.8490E+04	2.7508E+05			
-			-					
5.8554E+02	2.5472E+02	1.0755E+01	1.2222E+05	8.1683E+04	5.1230E+05			
-			-					
5.8554E+02	1.9104E+02	2.1599E+01	1.2222E+05	7.4876E+04	5.8967E+05			
-			-					
5.8554E+02	1.2736E+02	1.7033E+01	1.2222E+05	6.8069E+04	1.0647E+06			
-			-					
5.8554E+02	6.3680E+01	3.5962E+01	1.2222E+05	6.1262E+04	1.4735E+06			
-			-					
5.8554E+02	0.0000E+00	1.2938E+02	1.2222E+05	5.4455E+04	2.0776E+06			
-			-					
6.5822E+02	7.6416E+02	2.6887E+00	1.2222E+05	4.7648E+04	3.0198E+06			
-			-					
6.5822E+02	5.0944E+02	2.6887E+00	1.2222E+05	4.0841E+04	4.0879E+06			
-			-					
6.5822E+02	3.8208E+02	5.3774E+00	1.2222E+05	3.4035E+04	4.8087E+06			



DNV Denmark A/S
Tuborg Parkvej 8, 2.
DK-2900 Hellerup
VAT No. DK9832314

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
6.5822E+02	2.5472E+02	2.6887E+00	1.2222E+05	2.7228E+04	5.9391E+06			
-			-					
6.5822E+02	1.9104E+02	8.0661E+00	1.2222E+05	2.0421E+04	5.3953E+06			
-			-					
6.5822E+02	1.2736E+02	1.9632E+01	1.2222E+05	1.3614E+04	4.7462E+06			
-			-					
6.5822E+02	6.3680E+01	6.4511E+01	1.2222E+05	6.8069E+03	3.9657E+06			
-			-					
6.5822E+02	0.0000E+00	4.3594E+01	1.2222E+05	0.0000E+00	1.2506E+07			
-			-					
7.3090E+02	4.4576E+02	2.6887E+00	1.3009E+05	1.9059E+05	2.7993E+01			
-			-					
7.3090E+02	3.8208E+02	8.0661E+00	1.3009E+05	1.6337E+05	5.6000E+02			
-			-					
7.3090E+02	3.1840E+02	2.6887E+00	1.3009E+05	1.5656E+05	2.6136E+02			
-			-					
7.3090E+02	2.5472E+02	5.3774E+00	1.3009E+05	1.4975E+05	3.5142E+03			
-			-					
7.3090E+02	1.9104E+02	2.6887E+00	1.3009E+05	1.4295E+05	3.3441E+03			
-			-					
7.3090E+02	6.3680E+01	9.7779E+00	1.3009E+05	1.3614E+05	4.1345E+03			
-			-					
7.3090E+02	0.0000E+00	4.1903E+01	1.3009E+05	1.2933E+05	1.4959E+04			
-			-					
8.0358E+02	5.0944E+02	2.6887E+00	1.3009E+05	1.2252E+05	2.2906E+04			
-			-					
8.0358E+02	3.8208E+02	2.6887E+00	1.3009E+05	1.1572E+05	6.1807E+04			
-			-					
8.0358E+02	3.1840E+02	2.6887E+00	1.3009E+05	1.0891E+05	5.8851E+04			
-			-					
8.0358E+02	2.5472E+02	2.6887E+00	1.3009E+05	1.0210E+05	1.3428E+05			
-			-					
8.0358E+02	1.9104E+02	5.3774E+00	1.3009E+05	9.5297E+04	1.6892E+05			
-			-					
8.0358E+02	1.2736E+02	2.6887E+00	1.3009E+05	8.8490E+04	2.8142E+05			
-			-					
8.0358E+02	6.3680E+01	1.0844E+01	1.3009E+05	8.1683E+04	5.0829E+05			
-			-					
8.0358E+02	0.0000E+00	2.0443E+01	1.3009E+05	7.4876E+04	7.2874E+05			
-			-					
8.7626E+02	3.8208E+02	2.6887E+00	1.3009E+05	6.8069E+04	1.1182E+06			
-			-					
8.7626E+02	3.1840E+02	2.6887E+00	1.3009E+05	6.1262E+04	1.7401E+06			
-			-					
8.7626E+02	2.5472E+02	2.6887E+00	1.3009E+05	5.4455E+04	2.6063E+06			
-			-					
8.7626E+02	1.2736E+02	5.3774E+00	1.3009E+05	4.7648E+04	3.6463E+06			
-			-					
8.7626E+02	6.3680E+01	3.5892E+00	1.3009E+05	4.0841E+04	4.9223E+06			
-			-					
8.7626E+02	0.0000E+00	1.4255E+01	1.3009E+05	3.4035E+04	5.8754E+06			
-			-					
9.4893E+02	4.4576E+02	2.6887E+00	1.3009E+05	2.7228E+04	6.3246E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
9.4893E+02	3.1840E+02	2.6887E+00	1.3009E+05	2.0421E+04	6.4406E+06			
-			-					
9.4893E+02	2.5472E+02	5.3774E+00	1.3009E+05	1.3614E+04	5.0972E+06			
-			-					
9.4893E+02	1.2736E+02	2.6887E+00	1.3009E+05	6.8069E+03	4.0769E+06			
-			-					
9.4893E+02	6.3680E+01	2.6887E+00	1.3009E+05	0.0000E+00	1.2513E+07			
-			-					
9.4893E+02	0.0000E+00	6.1887E+00	1.3796E+05	1.5656E+05	9.8780E+01			
-			-					
1.0216E+03	1.9104E+02	2.6887E+00	1.3796E+05	1.4295E+05	9.8780E+01			
-			-					
1.0216E+03	1.2736E+02	2.6887E+00	1.3796E+05	1.2933E+05	1.2749E+03			
-			-					
1.0216E+03	6.3680E+01	5.3774E+00	1.3796E+05	1.2252E+05	2.5470E+03			
-			-					
1.0943E+03	1.9104E+02	2.6887E+00	1.3796E+05	1.1572E+05	5.4830E+03			
-			-					
1.1670E+03	0.0000E+00	1.0417E+01	1.3796E+05	1.0891E+05	2.2777E+04			
			-					
			1.3796E+05	1.0210E+05	5.2540E+04			
			-					
			1.3796E+05	9.5297E+04	6.3302E+04			
			-					
			1.3796E+05	8.8490E+04	1.2263E+05			
			-					
			1.3796E+05	8.1683E+04	2.0148E+05			
			-					
			1.3796E+05	7.4876E+04	4.5913E+05			
			-					
			1.3796E+05	6.8069E+04	6.9403E+05			
			-					
			1.3796E+05	6.1262E+04	1.1910E+06			
			-					
			1.3796E+05	5.4455E+04	1.9599E+06			
			-					
			1.3796E+05	4.7648E+04	2.8055E+06			
			-					
			1.3796E+05	4.0841E+04	3.7846E+06			
			-					
			1.3796E+05	3.4035E+04	4.9256E+06			
			-					
			1.3796E+05	2.7228E+04	5.2777E+06			
			-					
			1.3796E+05	2.0421E+04	5.6764E+06			
			-					
			1.3796E+05	1.3614E+04	4.6587E+06			
			-					
			1.3796E+05	6.8069E+03	3.9903E+06			
			-					
			1.3796E+05	0.0000E+00	1.0697E+07			
			-					
			1.4582E+05	1.3614E+05	9.8780E+01			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			-	1.2933E+05	1.3443E+00			
			1.4582E+05	1.2933E+05	1.3443E+00			
			-	1.1572E+05	1.0787E+03			
			1.4582E+05	1.1572E+05	1.0787E+03			
			-	1.0891E+05	3.9204E+02			
			1.4582E+05	1.0891E+05	3.9204E+02			
			-	1.0210E+05	2.0277E+02			
			1.4582E+05	1.0210E+05	2.0277E+02			
			-	9.5297E+04	1.4269E+04			
			1.4582E+05	9.5297E+04	1.4269E+04			
			-	8.8490E+04	4.3659E+03			
			1.4582E+05	8.8490E+04	4.3659E+03			
			-	8.1683E+04	4.8881E+04			
			1.4582E+05	8.1683E+04	4.8881E+04			
			-	7.4876E+04	7.4444E+04			
			1.4582E+05	7.4876E+04	7.4444E+04			
			-	6.8069E+04	2.2959E+05			
			1.4582E+05	6.8069E+04	2.2959E+05			
			-	6.1262E+04	4.0230E+05			
			1.4582E+05	6.1262E+04	4.0230E+05			
			-	5.4455E+04	6.4297E+05			
			1.4582E+05	5.4455E+04	6.4297E+05			
			-	4.7648E+04	9.8362E+05			
			1.4582E+05	4.7648E+04	9.8362E+05			
			-	4.0841E+04	1.6191E+06			
			1.4582E+05	4.0841E+04	1.6191E+06			
			-	3.4035E+04	2.2561E+06			
			1.4582E+05	3.4035E+04	2.2561E+06			
			-	2.7228E+04	2.6049E+06			
			1.4582E+05	2.7228E+04	2.6049E+06			
			-	2.0421E+04	2.7588E+06			
			1.4582E+05	2.0421E+04	2.7588E+06			
			-	1.3614E+04	2.5851E+06			
			1.4582E+05	1.3614E+04	2.5851E+06			
			-	6.8069E+03	2.2558E+06			
			1.4582E+05	6.8069E+03	2.2558E+06			
			-	0.0000E+00	7.1087E+06			
			1.4582E+05	0.0000E+00	7.1087E+06			
			-	8.8490E+04	2.1587E+03			
			1.5369E+05	8.8490E+04	2.1587E+03			
			-	8.1683E+04	2.5355E+02			
			1.5369E+05	8.1683E+04	2.5355E+02			
			-	7.4876E+04	1.7615E+04			
			1.5369E+05	7.4876E+04	1.7615E+04			
			-	6.8069E+04	2.2337E+04			
			1.5369E+05	6.8069E+04	2.2337E+04			
			-	6.1262E+04	3.0393E+04			
			1.5369E+05	6.1262E+04	3.0393E+04			
			-	5.4455E+04	1.0520E+05			
			1.5369E+05	5.4455E+04	1.0520E+05			
			-	4.7648E+04	1.7627E+05			
			1.5369E+05	4.7648E+04	1.7627E+05			
			-	4.0841E+04	3.0521E+05			
			1.5369E+05	4.0841E+04	3.0521E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			-					
			1.5369E+05	3.4035E+04	5.3473E+05			
			-					
			1.5369E+05	2.7228E+04	6.3738E+05			
			-					
			1.5369E+05	2.0421E+04	7.8674E+05			
			-					
			1.5369E+05	1.3614E+04	6.5379E+05			
			-					
			1.5369E+05	6.8069E+03	6.2311E+05			
			-					
			1.5369E+05	0.0000E+00	2.5685E+06			
			-					
			1.6155E+05	6.8069E+04	6.1137E+02			
			-					
			1.6155E+05	6.1262E+04	8.5709E+03			
			-					
			1.6155E+05	5.4455E+04	5.7451E+03			
			-					
			1.6155E+05	4.7648E+04	7.7130E+03			
			-					
			1.6155E+05	4.0841E+04	2.5574E+04			
			-					
			1.6155E+05	3.4035E+04	5.3157E+04			
			-					
			1.6155E+05	2.7228E+04	3.8114E+04			
			-					
			1.6155E+05	2.0421E+04	5.6115E+04			
			-					
			1.6155E+05	1.3614E+04	6.2590E+04			
			-					
			1.6155E+05	6.8069E+03	7.3417E+04			
			-					
			1.6155E+05	0.0000E+00	5.7413E+05			
			-					
			1.6942E+05	1.0891E+05	5.5986E+01			
			-					
			1.6942E+05	3.4035E+04	1.1100E+04			
			-					
			1.6942E+05	2.7228E+04	3.1589E+03			
			-					
			1.6942E+05	2.0421E+04	1.3275E+01			
			-					
			1.6942E+05	1.3614E+04	4.0331E+00			
			-					
			1.6942E+05	6.8069E+03	8.5666E+03			
			-					
			1.6942E+05	0.0000E+00	8.5754E+04			
			-					
			1.7728E+05	1.3614E+04	2.6887E+00			
			-					
			1.7728E+05	0.0000E+00	2.7367E+04			



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Foundation loads – EV162-6.8/7.2MW HH169m HA2A90A

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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles

Table 5-12 [2] Markov Matrix

Appendix E. Markov matrices – issued from [3]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [3]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.5431E+03	0.0000E+00	3.1385E+02	1.5934E+05	6.6090E+03	6.7216E+00	8.9181E+03	0.0000E+00	3.3608E+00
1.4760E+03	0.0000E+00	1.6500E+03	1.5190E+05	0.0000E+00	1.0082E+01	7.7986E+03	0.0000E+00	7.0000E+00
1.4089E+03	5.7685E+01	3.1385E+02	1.4445E+05	2.6436E+04	3.3608E+00	7.2389E+03	0.0000E+00	6.8328E+00
1.4089E+03	0.0000E+00	1.6757E+04	1.4445E+05	1.9827E+04	3.3608E+00	6.6792E+03	2.2418E+03	3.5000E+00
1.3418E+03	1.1537E+02	1.4000E+03	1.4445E+05	1.3218E+04	3.3608E+00	6.6792E+03	1.7934E+03	3.3608E+00
1.3418E+03	5.7685E+01	2.3469E+03	1.4445E+05	6.6090E+03	3.3608E+00	6.6792E+03	8.9670E+02	3.5000E+00
1.3418E+03	0.0000E+00	4.7706E+04	1.3700E+05	0.0000E+00	6.7216E+00	6.6792E+03	4.4835E+02	7.1022E+02
1.2747E+03	2.3074E+02	3.5271E+00	1.2956E+05	1.9827E+04	3.3608E+00	6.6792E+03	0.0000E+00	1.7849E+02
1.2747E+03	1.7305E+02	1.6973E+03	1.2956E+05	0.0000E+00	1.6804E+01	6.1195E+03	5.3802E+03	3.3608E+00
1.2747E+03	1.1537E+02	1.4147E+03	1.2211E+05	1.3218E+04	3.3608E+00	6.1195E+03	4.9319E+03	3.5000E+00
1.2747E+03	5.7685E+01	2.4645E+04	1.2211E+05	0.0000E+00	1.0082E+01	6.1195E+03	4.0352E+03	3.3608E+00
1.2747E+03	0.0000E+00	1.6847E+05	1.1467E+05	2.6436E+04	3.3608E+00	6.1195E+03	3.1385E+03	3.5000E+00
1.2076E+03	3.4611E+02	1.2347E+02	1.1467E+05	6.6090E+03	3.3608E+00	6.1195E+03	2.2418E+03	1.1125E-01
1.2076E+03	2.8842E+02	3.8211E+02	1.1467E+05	0.0000E+00	2.7026E+01	6.1195E+03	1.3451E+03	3.5000E+00
1.2076E+03	2.3074E+02	1.6804E+00	1.0722E+05	6.6090E+03	3.3608E+00	6.1195E+03	8.9670E+02	3.6112E+00
1.2076E+03	1.7305E+02	2.8718E+03	1.0722E+05	0.0000E+00	2.6998E+01	6.1195E+03	4.4835E+02	3.1732E+02
1.2076E+03	1.1537E+02	2.9567E+03	9.9773E+04	1.9827E+04	3.3608E+00	6.1195E+03	0.0000E+00	1.7819E+03
1.2076E+03	5.7685E+01	1.2910E+05	9.9773E+04	1.3218E+04	3.5000E+00	5.5597E+03	6.7253E+03	3.3608E+00
1.2076E+03	0.0000E+00	4.8846E+05	9.9773E+04	6.6090E+03	6.7216E+00	5.5597E+03	4.9319E+03	3.5000E+00
1.1404E+03	6.3453E+02	1.6804E+00	9.9773E+04	0.0000E+00	2.3526E+01	5.5597E+03	4.4835E+03	3.3608E+00
1.1404E+03	4.6148E+02	8.2465E+00	9.2327E+04	3.3045E+04	1.6521E+01	5.5597E+03	4.0352E+03	3.3608E+00
1.1404E+03	4.0379E+02	1.7152E+03	9.2327E+04	1.9827E+04	6.8608E+00	5.5597E+03	3.5868E+03	7.0000E+00
1.1404E+03	3.4611E+02	2.4881E+02	9.2327E+04	6.6090E+03	1.3443E+01	5.5597E+03	3.1385E+03	6.8608E+00
1.1404E+03	2.8842E+02	1.7500E+00	9.2327E+04	0.0000E+00	2.3943E+01	5.5597E+03	1.3451E+03	6.8608E+00
1.1404E+03	2.3074E+02	2.7170E+03	8.4880E+04	4.6263E+04	3.5000E+00	5.5597E+03	8.9670E+02	1.1125E-01
1.1404E+03	1.7305E+02	3.1940E+03	8.4880E+04	3.3045E+04	7.0000E+00	5.5597E+03	4.4835E+02	4.2773E+03
1.1404E+03	1.1537E+02	2.2465E+04	8.4880E+04	2.6436E+04	7.0000E+00	5.5597E+03	0.0000E+00	2.3907E+04
1.1404E+03	5.7685E+01	3.5767E+05	8.4880E+04	1.9827E+04	1.0222E+01	5.0000E+03	6.7253E+03	3.5000E+00
1.1404E+03	0.0000E+00	1.6761E+06	8.4880E+04	1.3218E+04	1.6943E+01	5.0000E+03	5.3802E+03	1.1125E-01
1.0733E+03	6.3453E+02	6.5105E+00	8.4880E+04	6.6090E+03	4.0469E+01	5.0000E+03	4.0352E+03	6.8608E+00
1.0733E+03	5.7685E+02	1.7500E+00	8.4880E+04	0.0000E+00	5.7412E+01	5.0000E+03	3.5868E+03	3.5000E+00
1.0733E+03	5.1916E+02	1.7136E+03	7.7434E+04	6.6090E+04	3.5000E+00	5.0000E+03	3.1385E+03	1.5807E+01
1.0733E+03	4.6148E+02	6.5105E+00	7.7434E+04	4.6263E+04	7.0000E+00	5.0000E+03	2.2418E+03	2.5888E+00
1.0733E+03	4.0379E+02	1.2446E+01	7.7434E+04	3.3045E+04	3.3608E+00	5.0000E+03	1.7934E+03	3.5000E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0733E+03	3.4611E+02	1.6186E+02	7.7434E+04	2.6436E+04	3.5000E+00	5.0000E+03	1.3451E+03	3.9762E+01
1.0733E+03	2.3074E+02	3.7340E+03	7.7434E+04	1.9827E+04	3.5000E+00	5.0000E+03	8.9670E+02	1.2267E+04
1.0733E+03	1.7305E+02	5.4424E+03	7.7434E+04	1.3218E+04	1.1472E+01	5.0000E+03	4.4835E+02	2.6228E+04
1.0733E+03	1.1537E+02	1.1349E+05	7.7434E+04	6.6090E+03	3.5526E+01	5.0000E+03	0.0000E+00	1.5856E+05
1.0733E+03	5.7685E+01	1.1397E+06	7.7434E+04	0.0000E+00	7.5851E+01	4.4403E+03	1.6589E+04	1.6804E+00
1.0733E+03	0.0000E+00	3.9740E+06	6.9987E+04	1.8505E+05	1.6804E+00	4.4403E+03	1.2554E+04	1.7500E+00
1.0062E+03	1.1537E+03	6.9983E+01	6.9987E+04	1.7183E+05	1.6804E+00	4.4403E+03	7.6220E+03	3.3608E+00
1.0062E+03	1.0383E+03	3.3608E+00	6.9987E+04	7.9308E+04	3.5000E+00	4.4403E+03	4.4835E+03	3.3608E+00
1.0062E+03	9.2296E+02	1.4038E+02	6.9987E+04	7.2699E+04	3.3608E+00	4.4403E+03	3.5868E+03	1.5076E+01
1.0062E+03	8.0759E+02	2.4695E+02	6.9987E+04	3.9654E+04	6.8608E+00	4.4403E+03	3.1385E+03	4.4336E+00
1.0062E+03	7.4990E+02	1.6733E+03	6.9987E+04	3.3045E+04	2.0861E+01	4.4403E+03	2.6901E+03	9.3883E+03
1.0062E+03	6.9222E+02	1.5329E+03	6.9987E+04	1.9827E+04	1.0611E+01	4.4403E+03	2.2418E+03	8.1913E+02
1.0062E+03	6.3453E+02	1.4542E+02	6.9987E+04	1.3218E+04	3.6936E+01	4.4403E+03	1.7934E+03	1.7953E+04
1.0062E+03	5.7685E+02	2.9642E+04	6.9987E+04	6.6090E+03	3.6825E+01	4.4403E+03	1.3451E+03	3.6627E+03
1.0062E+03	5.1916E+02	1.7734E+04	6.9987E+04	0.0000E+00	1.1270E+02	4.4403E+03	8.9670E+02	6.4091E+04
1.0062E+03	4.6148E+02	2.0969E+04	6.2541E+04	2.0488E+05	1.6804E+00	4.4403E+03	4.4835E+02	1.7698E+05
1.0062E+03	4.0379E+02	3.7504E+04	6.2541E+04	1.9827E+05	1.6804E+00	4.4403E+03	0.0000E+00	6.5101E+05
1.0062E+03	3.4611E+02	6.9512E+03	6.2541E+04	1.7844E+05	1.6804E+00	3.8805E+03	1.3451E+04	3.4304E+00
1.0062E+03	2.8842E+02	3.1346E+04	6.2541E+04	1.6522E+05	1.6804E+00	3.8805E+03	1.1209E+04	1.1125E-01
1.0062E+03	2.3074E+02	1.6633E+04	6.2541E+04	1.5201E+05	1.6804E+00	3.8805E+03	7.6220E+03	3.4720E+00
1.0062E+03	1.7305E+02	7.0741E+04	6.2541E+04	9.2526E+04	3.3608E+00	3.8805E+03	6.7253E+03	3.1721E+02
1.0062E+03	1.1537E+02	5.7707E+05	6.2541E+04	8.5917E+04	3.3608E+00	3.8805E+03	5.3802E+03	3.4596E+02
1.0062E+03	5.7685E+01	3.2124E+06	6.2541E+04	5.9481E+04	3.5000E+00	3.8805E+03	4.9319E+03	8.8030E+02
1.0062E+03	0.0000E+00	8.2845E+06	6.2541E+04	4.6263E+04	1.9882E+01	3.8805E+03	4.4835E+03	2.6640E+01
9.3912E+02	1.6152E+03	1.2347E+02	6.2541E+04	3.9654E+04	6.8608E+00	3.8805E+03	4.0352E+03	1.0898E+04
9.3912E+02	1.5575E+03	1.2347E+02	6.2541E+04	3.3045E+04	1.0500E+01	3.8805E+03	3.5868E+03	1.0112E+04
9.3912E+02	1.4998E+03	7.0000E+02	6.2541E+04	2.6436E+04	2.3604E+01	3.8805E+03	3.1385E+03	3.7312E+04
9.3912E+02	1.3268E+03	2.4695E+02	6.2541E+04	1.9827E+04	2.1972E+01	3.8805E+03	2.6901E+03	3.2591E+04
9.3912E+02	1.2691E+03	6.8639E+03	6.2541E+04	1.3218E+04	2.6743E+01	3.8805E+03	2.2418E+03	1.6895E+05
9.3912E+02	1.2114E+03	1.9531E+01	6.2541E+04	6.6090E+03	4.0998E+01	3.8805E+03	1.7934E+03	1.1977E+05
9.3912E+02	1.1537E+03	1.0714E+04	6.2541E+04	0.0000E+00	1.1081E+02	3.8805E+03	1.3451E+03	1.7737E+05
9.3912E+02	1.0960E+03	1.7063E+04	5.5095E+04	1.9827E+05	1.6804E+00	3.8805E+03	8.9670E+02	2.4497E+05
9.3912E+02	1.0383E+03	2.9740E+04	5.5095E+04	1.7183E+05	1.6804E+00	3.8805E+03	4.4835E+02	6.3465E+05
9.3912E+02	9.8064E+02	3.2987E+04	5.5095E+04	1.5862E+05	1.7500E+00	3.8805E+03	0.0000E+00	1.7439E+06
9.3912E+02	9.2296E+02	4.0917E+04	5.5095E+04	1.3879E+05	3.3608E+00	3.3208E+03	1.3899E+04	1.6804E+00
9.3912E+02	8.6527E+02	3.3717E+04	5.5095E+04	1.2557E+05	1.6804E+00	3.3208E+03	1.2106E+04	1.6804E+00
9.3912E+02	8.0759E+02	9.1441E+04	5.5095E+04	9.2526E+04	3.5000E+00	3.3208E+03	7.6220E+03	3.5868E+00
9.3912E+02	7.4990E+02	1.0758E+05	5.5095E+04	8.5917E+04	3.5000E+00	3.3208E+03	7.1736E+03	3.3608E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.3912E+02	6.9222E+02	1.7672E+05	5.5095E+04	7.2699E+04	3.5000E+00	3.3208E+03	6.7253E+03	1.3104E+02
9.3912E+02	6.3453E+02	2.8157E+05	5.5095E+04	5.9481E+04	6.8608E+00	3.3208E+03	6.2769E+03	1.3077E+01
9.3912E+02	5.7685E+02	3.1243E+05	5.5095E+04	5.2872E+04	4.7500E+00	3.3208E+03	5.8286E+03	4.2106E+03
9.3912E+02	5.1916E+02	4.7673E+05	5.5095E+04	4.6263E+04	1.3972E+01	3.3208E+03	5.3802E+03	5.8291E+02
9.3912E+02	4.6148E+02	5.8022E+05	5.5095E+04	3.9654E+04	1.8611E+01	3.3208E+03	4.9319E+03	2.8876E+04
9.3912E+02	4.0379E+02	6.1364E+05	5.5095E+04	3.3045E+04	3.3264E+01	3.3208E+03	4.4835E+03	4.2128E+04
9.3912E+02	3.4611E+02	7.4368E+05	5.5095E+04	2.6436E+04	2.3493E+01	3.3208E+03	4.0352E+03	8.7943E+04
9.3912E+02	2.8842E+02	5.5037E+05	5.5095E+04	1.9827E+04	7.0833E+00	3.3208E+03	3.5868E+03	2.6879E+05
9.3912E+02	2.3074E+02	5.6974E+05	5.5095E+04	1.3218E+04	5.8187E+01	3.3208E+03	3.1385E+03	2.7627E+05
9.3912E+02	1.7305E+02	5.9904E+05	5.5095E+04	6.6090E+03	6.7740E+01	3.3208E+03	2.6901E+03	3.5590E+05
9.3912E+02	1.1537E+02	1.7500E+06	5.5095E+04	0.0000E+00	1.1246E+02	3.3208E+03	2.2418E+03	3.8927E+05
9.3912E+02	5.7685E+01	7.8487E+06	4.7648E+04	1.8505E+05	1.6804E+00	3.3208E+03	1.7934E+03	3.8937E+05
9.3912E+02	0.0000E+00	1.5126E+07	4.7648E+04	1.6522E+05	5.0412E+00	3.3208E+03	1.3451E+03	3.9244E+05
8.7201E+02	2.0190E+03	7.0000E+02	4.7648E+04	1.5862E+05	1.6804E+00	3.3208E+03	8.9670E+02	5.8470E+05
8.7201E+02	1.9613E+03	8.5692E+02	4.7648E+04	1.4540E+05	3.3608E+00	3.3208E+03	4.4835E+02	1.9214E+06
8.7201E+02	1.9036E+03	7.0190E+01	4.7648E+04	1.3879E+05	5.1108E+00	3.3208E+03	0.0000E+00	3.8236E+06
8.7201E+02	1.8459E+03	1.2347E+02	4.7648E+04	1.3218E+05	5.1804E+00	2.7611E+03	1.9727E+04	1.6804E+00
8.7201E+02	1.7305E+03	1.6804E+00	4.7648E+04	1.2557E+05	6.9304E+00	2.7611E+03	1.8831E+04	5.5625E-02
8.7201E+02	1.6729E+03	1.7675E+03	4.7648E+04	1.1896E+05	1.7500E+00	2.7611E+03	1.8382E+04	5.5625E-02
8.7201E+02	1.6152E+03	4.3937E+03	4.7648E+04	1.1235E+05	1.6804E+00	2.7611E+03	1.5244E+04	1.6804E+00
8.7201E+02	1.5575E+03	5.6920E+03	4.7648E+04	9.9135E+04	3.5000E+00	2.7611E+03	1.2106E+04	1.7500E+00
8.7201E+02	1.4998E+03	9.2687E+03	4.7648E+04	8.5917E+04	6.8608E+00	2.7611E+03	1.1209E+04	1.7500E+00
8.7201E+02	1.4421E+03	1.3906E+04	4.7648E+04	7.9308E+04	1.3582E+01	2.7611E+03	1.0312E+04	1.6804E+00
8.7201E+02	1.3844E+03	1.0982E+04	4.7648E+04	7.2699E+04	3.5000E+00	2.7611E+03	9.8637E+03	1.7500E+00
8.7201E+02	1.3268E+03	3.2275E+04	4.7648E+04	5.9481E+04	1.0082E+01	2.7611E+03	7.6220E+03	3.8337E+00
8.7201E+02	1.2691E+03	5.3066E+04	4.7648E+04	5.2872E+04	1.0361E+01	2.7611E+03	7.1736E+03	4.9468E+03
8.7201E+02	1.2114E+03	5.5656E+04	4.7648E+04	4.6263E+04	7.0000E+00	2.7611E+03	6.7253E+03	1.5490E+04
8.7201E+02	1.1537E+03	7.2897E+04	4.7648E+04	3.9654E+04	2.3382E+01	2.7611E+03	6.2769E+03	2.3169E+04
8.7201E+02	1.0960E+03	9.5010E+04	4.7648E+04	3.3045E+04	1.7194E+01	2.7611E+03	5.8286E+03	4.0638E+04
8.7201E+02	1.0383E+03	1.3403E+05	4.7648E+04	2.6436E+04	2.7861E+01	2.7611E+03	5.3802E+03	1.1907E+05
8.7201E+02	9.8064E+02	2.3131E+05	4.7648E+04	1.9827E+04	2.6526E+01	2.7611E+03	4.9319E+03	1.3507E+05
8.7201E+02	9.2296E+02	3.5321E+05	4.7648E+04	1.3218E+04	3.7609E+01	2.7611E+03	4.4835E+03	2.7199E+05
8.7201E+02	8.6527E+02	4.7644E+05	4.7648E+04	6.6090E+03	3.9193E+01	2.7611E+03	4.0352E+03	4.7473E+05
8.7201E+02	8.0759E+02	8.4195E+05	4.7648E+04	0.0000E+00	1.4160E+02	2.7611E+03	3.5868E+03	5.7754E+05
8.7201E+02	7.4990E+02	1.0331E+06	4.0202E+04	1.8505E+05	1.6804E+00	2.7611E+03	3.1385E+03	6.3779E+05
8.7201E+02	6.9222E+02	1.4223E+06	4.0202E+04	1.7183E+05	1.7500E+00	2.7611E+03	2.6901E+03	7.5541E+05
8.7201E+02	6.3453E+02	1.6957E+06	4.0202E+04	1.5862E+05	3.4304E+00	2.7611E+03	2.2418E+03	8.8188E+05
8.7201E+02	5.7685E+02	2.2344E+06	4.0202E+04	1.5201E+05	6.9304E+00	2.7611E+03	1.7934E+03	8.1951E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.7201E+02	5.1916E+02	2.9348E+06	4.0202E+04	1.4540E+05	6.9304E+00	2.7611E+03	1.3451E+03	7.8551E+05
8.7201E+02	4.6148E+02	3.0609E+06	4.0202E+04	1.3879E+05	3.5000E+00	2.7611E+03	8.9670E+02	1.4000E+06
8.7201E+02	4.0379E+02	3.5465E+06	4.0202E+04	1.3218E+05	3.4304E+00	2.7611E+03	4.4835E+02	3.5009E+06
8.7201E+02	3.4611E+02	3.7788E+06	4.0202E+04	1.2557E+05	5.1804E+00	2.7611E+03	0.0000E+00	7.0174E+06
8.7201E+02	2.8842E+02	3.3111E+06	4.0202E+04	1.1896E+05	5.2500E+00	2.2014E+03	1.7037E+04	1.6804E+00
8.7201E+02	2.3074E+02	2.9448E+06	4.0202E+04	1.1235E+05	3.4304E+00	2.2014E+03	1.5244E+04	5.5625E-02
8.7201E+02	1.7305E+02	2.8962E+06	4.0202E+04	1.0574E+05	3.3608E+00	2.2014E+03	1.2106E+04	8.5412E+00
8.7201E+02	1.1537E+02	4.5703E+06	4.0202E+04	9.9135E+04	8.7500E+00	2.2014E+03	1.1657E+04	1.6804E+00
8.7201E+02	5.7685E+01	1.4142E+07	4.0202E+04	8.5917E+04	6.8608E+00	2.2014E+03	1.0760E+04	1.7500E+00
8.7201E+02	0.0000E+00	2.2131E+07	4.0202E+04	7.9308E+04	3.5000E+00	2.2014E+03	1.0312E+04	1.8613E+00
8.0490E+02	2.2497E+03	7.0000E+02	4.0202E+04	7.2699E+04	7.0000E+00	2.2014E+03	9.8637E+03	1.3014E+01
8.0490E+02	2.1343E+03	3.1385E+02	4.0202E+04	6.6090E+04	6.9720E+00	2.2014E+03	9.4154E+03	3.0310E+03
8.0490E+02	2.0767E+03	2.4201E+03	4.0202E+04	5.9481E+04	1.4000E+01	2.2014E+03	8.9670E+03	2.7204E+03
8.0490E+02	2.0190E+03	7.3499E+02	4.0202E+04	5.2872E+04	2.0861E+01	2.2014E+03	8.5187E+03	1.5676E+03
8.0490E+02	1.9613E+03	1.9075E+03	4.0202E+04	4.6263E+04	3.5000E+00	2.2014E+03	8.0703E+03	1.8597E+03
8.0490E+02	1.9036E+03	1.8039E+03	4.0202E+04	3.9654E+04	4.8666E+01	2.2014E+03	7.6220E+03	1.1070E+04
8.0490E+02	1.8459E+03	4.3698E+03	4.0202E+04	3.3045E+04	2.8195E+01	2.2014E+03	7.1736E+03	3.5381E+04
8.0490E+02	1.7882E+03	6.9573E+03	4.0202E+04	2.6436E+04	1.8833E+01	2.2014E+03	6.7253E+03	6.6243E+04
8.0490E+02	1.7305E+03	1.8131E+04	4.0202E+04	1.9827E+04	1.7359E+02	2.2014E+03	6.2769E+03	1.2743E+05
8.0490E+02	1.6729E+03	1.1111E+04	4.0202E+04	1.3218E+04	3.2666E+01	2.2014E+03	5.8286E+03	1.5024E+05
8.0490E+02	1.6152E+03	2.2178E+04	4.0202E+04	6.6090E+03	2.5522E+02	2.2014E+03	5.3802E+03	2.9577E+05
8.0490E+02	1.5575E+03	3.9372E+04	4.0202E+04	0.0000E+00	1.3287E+04	2.2014E+03	4.9319E+03	3.8666E+05
8.0490E+02	1.4998E+03	3.9618E+04	3.2755E+04	1.7844E+05	1.7500E+00	2.2014E+03	4.4835E+03	5.3536E+05
8.0490E+02	1.4421E+03	6.2901E+04	3.2755E+04	1.7183E+05	1.6804E+00	2.2014E+03	4.0352E+03	7.9655E+05
8.0490E+02	1.3844E+03	9.2309E+04	3.2755E+04	1.5862E+05	3.4304E+00	2.2014E+03	3.5868E+03	1.0245E+06
8.0490E+02	1.3268E+03	1.6989E+05	3.2755E+04	1.5201E+05	3.5000E+00	2.2014E+03	3.1385E+03	1.1812E+06
8.0490E+02	1.2691E+03	2.2226E+05	3.2755E+04	1.4540E+05	5.2500E+00	2.2014E+03	2.6901E+03	1.5896E+06
8.0490E+02	1.2114E+03	2.8037E+05	3.2755E+04	1.3879E+05	8.7500E+00	2.2014E+03	2.2418E+03	1.4108E+06
8.0490E+02	1.1537E+03	4.9671E+05	3.2755E+04	1.3218E+05	5.1804E+00	2.2014E+03	1.7934E+03	1.5954E+06
8.0490E+02	1.0960E+03	5.3852E+05	3.2755E+04	1.2557E+05	1.7500E+00	2.2014E+03	1.3451E+03	1.9425E+06
8.0490E+02	1.0383E+03	8.1823E+05	3.2755E+04	1.1896E+05	1.2111E+01	2.2014E+03	8.9670E+02	2.7229E+06
8.0490E+02	9.8064E+02	1.1014E+06	3.2755E+04	1.1235E+05	3.4304E+00	2.2014E+03	4.4835E+02	6.1720E+06
8.0490E+02	9.2296E+02	1.4371E+06	3.2755E+04	1.0574E+05	3.5000E+00	2.2014E+03	0.0000E+00	1.2985E+07
8.0490E+02	8.6527E+02	1.7887E+06	3.2755E+04	9.9135E+04	1.7500E+00	1.6416E+03	1.7037E+04	5.5625E-02
8.0490E+02	8.0759E+02	2.3907E+06	3.2755E+04	9.2526E+04	5.2500E+00	1.6416E+03	1.6589E+04	5.5625E-02
8.0490E+02	7.4990E+02	2.7201E+06	3.2755E+04	8.5917E+04	2.4500E+01	1.6416E+03	1.5692E+04	1.6804E+00
8.0490E+02	6.9222E+02	3.5527E+06	3.2755E+04	7.9308E+04	1.0361E+01	1.6416E+03	1.2106E+04	5.5625E-02
8.0490E+02	6.3453E+02	4.6846E+06	3.2755E+04	7.2699E+04	7.0000E+00	1.6416E+03	1.1657E+04	1.2985E+07

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.0490E+02	5.7685E+02	5.0000E+06	3.2755E+04	6.6090E+04	3.5111E+01	1.6416E+03	1.1209E+04	4.0636E+02
8.0490E+02	5.1916E+02	5.6820E+06	3.2755E+04	5.9481E+04	3.9640E+01	1.6416E+03	1.0760E+04	1.6481E+02
8.0490E+02	4.6148E+02	6.2881E+06	3.2755E+04	5.2872E+04	3.8361E+01	1.6416E+03	1.0312E+04	3.7851E+02
8.0490E+02	4.0379E+02	6.5600E+06	3.2755E+04	4.6263E+04	3.2332E+01	1.6416E+03	9.8637E+03	2.8619E+03
8.0490E+02	3.4611E+02	6.0319E+06	3.2755E+04	3.9654E+04	4.9580E+01	1.6416E+03	9.4154E+03	2.0914E+03
8.0490E+02	2.8842E+02	6.0120E+06	3.2755E+04	3.3045E+04	7.3634E+01	1.6416E+03	8.9670E+03	8.7794E+03
8.0490E+02	2.3074E+02	4.7407E+06	3.2755E+04	2.6436E+04	1.4227E+02	1.6416E+03	8.5187E+03	1.5118E+04
8.0490E+02	1.7305E+02	4.2304E+06	3.2755E+04	1.9827E+04	9.1199E+01	1.6416E+03	8.0703E+03	2.3022E+04
8.0490E+02	1.1537E+02	6.8008E+06	3.2755E+04	1.3218E+04	4.4425E+03	1.6416E+03	7.6220E+03	4.0871E+04
8.0490E+02	5.7685E+01	1.9503E+07	3.2755E+04	6.6090E+03	3.4816E+04	1.6416E+03	7.1736E+03	1.0294E+05
8.0490E+02	0.0000E+00	2.9516E+07	3.2755E+04	0.0000E+00	2.7159E+04	1.6416E+03	6.7253E+03	1.3147E+05
7.3779E+02	2.3651E+03	1.5693E+02	2.5309E+04	1.7844E+05	5.5625E-02	1.6416E+03	6.2769E+03	2.2441E+05
7.3779E+02	2.3074E+03	8.5692E+02	2.5309E+04	1.5862E+05	1.6804E+00	1.6416E+03	5.8286E+03	3.9394E+05
7.3779E+02	2.1920E+03	1.7838E+03	2.5309E+04	1.5201E+05	1.6804E+00	1.6416E+03	5.3802E+03	5.5174E+05
7.3779E+02	2.1343E+03	1.9346E+03	2.5309E+04	1.4540E+05	3.3608E+00	1.6416E+03	4.9319E+03	7.5577E+05
7.3779E+02	2.0767E+03	5.1174E+02	2.5309E+04	1.3879E+05	3.4860E+00	1.6416E+03	4.4835E+03	8.9774E+05
7.3779E+02	2.0190E+03	5.1679E+03	2.5309E+04	1.3218E+05	5.8610E+00	1.6416E+03	4.0352E+03	1.4733E+06
7.3779E+02	1.9613E+03	6.6251E+02	2.5309E+04	1.2557E+05	5.1804E+00	1.6416E+03	3.5868E+03	1.6711E+06
7.3779E+02	1.9036E+03	1.2555E+04	2.5309E+04	1.1896E+05	5.5625E-02	1.6416E+03	3.1385E+03	1.9013E+06
7.3779E+02	1.8459E+03	1.0182E+04	2.5309E+04	1.1235E+05	9.3054E+00	1.6416E+03	2.6901E+03	2.5843E+06
7.3779E+02	1.7882E+03	1.0406E+04	2.5309E+04	1.0574E+05	3.5000E+00	1.6416E+03	2.2418E+03	2.8907E+06
7.3779E+02	1.7305E+03	1.7060E+04	2.5309E+04	9.9135E+04	3.5000E+00	1.6416E+03	1.7934E+03	2.7073E+06
7.3779E+02	1.6729E+03	3.6932E+04	2.5309E+04	9.2526E+04	8.6108E+00	1.6416E+03	1.3451E+03	3.0093E+06
7.3779E+02	1.6152E+03	5.9409E+04	2.5309E+04	8.5917E+04	1.2083E+01	1.6416E+03	8.9670E+02	4.3065E+06
7.3779E+02	1.5575E+03	7.3734E+04	2.5309E+04	7.9308E+04	1.5750E+01	1.6416E+03	4.4835E+02	9.3443E+06
7.3779E+02	1.4998E+03	7.0979E+04	2.5309E+04	7.2699E+04	3.0513E+01	1.6416E+03	0.0000E+00	1.9823E+07
7.3779E+02	1.4421E+03	1.5132E+05	2.5309E+04	6.6090E+04	7.9435E+01	1.0819E+03	1.7486E+04	5.5625E-02
7.3779E+02	1.3844E+03	1.4118E+05	2.5309E+04	5.9481E+04	4.2000E+01	1.0819E+03	1.7037E+04	6.5210E+01
7.3779E+02	1.3268E+03	2.0677E+05	2.5309E+04	5.2872E+04	5.3780E+01	1.0819E+03	1.6141E+04	8.0583E+01
7.3779E+02	1.2691E+03	3.0296E+05	2.5309E+04	4.6263E+04	6.1525E+01	1.0819E+03	1.4796E+04	6.5635E+00
7.3779E+02	1.2114E+03	3.5932E+05	2.5309E+04	3.9654E+04	1.8367E+02	1.0819E+03	1.3899E+04	7.0000E+02
7.3779E+02	1.1537E+03	5.9174E+05	2.5309E+04	3.3045E+04	2.6952E+02	1.0819E+03	1.3451E+04	7.4506E+01
7.3779E+02	1.0960E+03	7.2199E+05	2.5309E+04	2.6436E+04	2.1296E+02	1.0819E+03	1.3002E+04	1.5373E+01
7.3779E+02	1.0383E+03	1.0185E+06	2.5309E+04	1.9827E+04	4.2290E+02	1.0819E+03	1.2554E+04	2.1604E+02
7.3779E+02	9.8064E+02	1.1823E+06	2.5309E+04	1.3218E+04	2.6244E+04	1.0819E+03	1.2106E+04	4.3837E+00
7.3779E+02	9.2296E+02	1.6890E+06	2.5309E+04	6.6090E+03	6.5522E+04	1.0819E+03	1.1657E+04	4.7706E+01
7.3779E+02	8.6527E+02	2.0129E+06	2.5309E+04	0.0000E+00	2.3949E+05	1.0819E+03	1.1209E+04	7.5678E-01
7.3779E+02	8.0759E+02	2.7472E+06	1.7863E+04	1.7183E+05	5.5625E-02	1.0819E+03	1.0760E+04	3.01E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.3779E+02	7.4990E+02	3.2522E+06	1.7863E+04	1.6522E+05	6.8063E-01	1.0819E+03	1.0312E+04	1.8642E+04
7.3779E+02	6.9222E+02	4.1836E+06	1.7863E+04	1.5862E+05	6.2500E-01	1.0819E+03	9.8637E+03	6.1206E+03
7.3779E+02	6.3453E+02	4.7923E+06	1.7863E+04	1.4540E+05	3.3608E+00	1.0819E+03	9.4154E+03	1.5745E+04
7.3779E+02	5.7685E+02	5.3878E+06	1.7863E+04	1.3879E+05	2.3610E+00	1.0819E+03	8.9670E+03	1.1624E+04
7.3779E+02	5.1916E+02	6.2713E+06	1.7863E+04	1.3218E+05	6.2500E-01	1.0819E+03	8.5187E+03	5.1642E+04
7.3779E+02	4.6148E+02	6.6658E+06	1.7863E+04	1.2557E+05	4.6804E+00	1.0819E+03	8.0703E+03	5.6717E+04
7.3779E+02	4.0379E+02	6.9456E+06	1.7863E+04	1.1896E+05	3.4860E+00	1.0819E+03	7.6220E+03	8.1363E+04
7.3779E+02	3.4611E+02	6.6383E+06	1.7863E+04	1.1235E+05	1.2500E+00	1.0819E+03	7.1736E+03	1.4426E+05
7.3779E+02	2.8842E+02	6.1391E+06	1.7863E+04	1.0574E+05	4.1250E+00	1.0819E+03	6.7253E+03	2.3802E+05
7.3779E+02	2.3074E+02	5.5255E+06	1.7863E+04	9.9135E+04	1.4779E+01	1.0819E+03	6.2769E+03	2.9643E+05
7.3779E+02	1.7305E+02	4.7070E+06	1.7863E+04	9.2526E+04	1.0500E+01	1.0819E+03	5.8286E+03	5.6942E+05
7.3779E+02	1.1537E+02	6.9329E+06	1.7863E+04	8.5917E+04	7.2196E+01	1.0819E+03	5.3802E+03	7.6635E+05
7.3779E+02	5.7685E+01	2.1777E+07	1.7863E+04	7.9308E+04	5.4488E+01	1.0819E+03	4.9319E+03	1.1300E+06
7.3779E+02	0.0000E+00	3.3945E+07	1.7863E+04	7.2699E+04	6.1163E+01	1.0819E+03	4.4835E+03	1.4008E+06
6.7068E+02	2.4805E+03	1.5693E+02	1.7863E+04	6.6090E+04	8.3682E+01	1.0819E+03	4.0352E+03	1.8328E+06
6.7068E+02	2.4228E+03	3.4992E+01	1.7863E+04	5.9481E+04	1.5690E+02	1.0819E+03	3.5868E+03	2.3552E+06
6.7068E+02	2.3074E+03	1.4350E+03	1.7863E+04	5.2872E+04	2.3906E+03	1.0819E+03	3.1385E+03	2.9419E+06
6.7068E+02	2.2497E+03	1.5847E+02	1.7863E+04	4.6263E+04	4.4899E+03	1.0819E+03	2.6901E+03	3.9162E+06
6.7068E+02	2.1920E+03	7.3499E+02	1.7863E+04	3.9654E+04	3.0612E+02	1.0819E+03	2.2418E+03	4.1162E+06
6.7068E+02	2.1343E+03	1.1937E+03	1.7863E+04	3.3045E+04	6.0918E+02	1.0819E+03	1.7934E+03	4.8947E+06
6.7068E+02	2.0767E+03	4.8813E+03	1.7863E+04	2.6436E+04	9.1164E+03	1.0819E+03	1.3451E+03	5.0889E+06
6.7068E+02	2.0190E+03	9.0882E+03	1.7863E+04	1.9827E+04	5.5514E+03	1.0819E+03	8.9670E+02	6.5702E+06
6.7068E+02	1.9613E+03	5.4531E+03	1.7863E+04	1.3218E+04	1.4294E+04	1.0819E+03	4.4835E+02	1.4250E+07
6.7068E+02	1.9036E+03	1.0584E+04	1.7863E+04	6.6090E+03	1.8392E+05	1.0819E+03	0.0000E+00	3.1888E+07
6.7068E+02	1.8459E+03	1.0140E+04	1.7863E+04	0.0000E+00	9.0975E+05	5.2217E+02	1.7037E+04	1.5373E+01
6.7068E+02	1.7882E+03	1.4920E+04	1.0416E+04	3.1723E+05	1.6804E+00	5.2217E+02	1.6141E+04	5.9715E+00
6.7068E+02	1.7305E+03	1.6470E+04	1.0416E+04	1.9166E+05	5.5625E-02	5.2217E+02	1.5692E+04	5.9203E-01
6.7068E+02	1.6729E+03	2.2229E+04	1.0416E+04	1.8505E+05	5.5625E-02	5.2217E+02	1.5244E+04	3.3580E+02
6.7068E+02	1.6152E+03	6.5115E+04	1.0416E+04	1.5201E+05	1.6804E+00	5.2217E+02	1.4796E+04	8.7109E+02
6.7068E+02	1.5575E+03	5.7959E+04	1.0416E+04	1.4540E+05	3.3608E+00	5.2217E+02	1.4347E+04	9.8331E+00
6.7068E+02	1.4998E+03	1.0253E+05	1.0416E+04	1.3879E+05	2.5419E+00	5.2217E+02	1.3899E+04	3.6908E+01
6.7068E+02	1.4421E+03	1.2230E+05	1.0416E+04	1.3218E+05	1.7360E+00	5.2217E+02	1.3451E+04	2.2037E+03
6.7068E+02	1.3844E+03	1.5547E+05	1.0416E+04	1.2557E+05	1.7360E+00	5.2217E+02	1.3002E+04	1.8101E+02
6.7068E+02	1.3268E+03	2.2137E+05	1.0416E+04	1.1896E+05	5.5625E-02	5.2217E+02	1.2554E+04	2.6279E+03
6.7068E+02	1.2691E+03	2.9985E+05	1.0416E+04	1.1235E+05	5.5625E-02	5.2217E+02	1.2106E+04	6.9989E+03
6.7068E+02	1.2114E+03	3.4000E+05	1.0416E+04	1.0574E+05	6.8063E-01	5.2217E+02	1.1657E+04	2.7681E+04
6.7068E+02	1.1537E+03	4.6512E+05	1.0416E+04	9.9135E+04	1.6412E+01	5.2217E+02	1.1209E+04	2.2875E+04
6.7068E+02	1.0960E+03	6.8051E+05	1.0416E+04	9.2526E+04	1.2949E+04	5.2217E+02	1.0760E+04	4.8351E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.7068E+02	1.0383E+03	9.1786E+05	1.0416E+04	8.5917E+04	2.5876E+04	5.2217E+02	1.0312E+04	2.6204E+04
6.7068E+02	9.8064E+02	1.2262E+06	1.0416E+04	7.9308E+04	6.0822E+01	5.2217E+02	9.8637E+03	4.5347E+04
6.7068E+02	9.2296E+02	1.4141E+06	1.0416E+04	7.2699E+04	1.3044E+04	5.2217E+02	9.4154E+03	7.2930E+04
6.7068E+02	8.6527E+02	1.9275E+06	1.0416E+04	6.6090E+04	3.8931E+04	5.2217E+02	8.9670E+03	5.5961E+04
6.7068E+02	8.0759E+02	2.2651E+06	1.0416E+04	5.9481E+04	2.6115E+04	5.2217E+02	8.5187E+03	7.8997E+04
6.7068E+02	7.4990E+02	3.1822E+06	1.0416E+04	5.2872E+04	6.8156E+03	5.2217E+02	8.0703E+03	1.4640E+05
6.7068E+02	6.9222E+02	3.6189E+06	1.0416E+04	4.6263E+04	5.4148E+04	5.2217E+02	7.6220E+03	1.6784E+05
6.7068E+02	6.3453E+02	4.5448E+06	1.0416E+04	3.9654E+04	6.7706E+04	5.2217E+02	7.1736E+03	2.3310E+05
6.7068E+02	5.7685E+02	4.9314E+06	1.0416E+04	3.3045E+04	2.6497E+04	5.2217E+02	6.7253E+03	3.4676E+05
6.7068E+02	5.1916E+02	5.7920E+06	1.0416E+04	2.6436E+04	3.7584E+04	5.2217E+02	6.2769E+03	4.6275E+05
6.7068E+02	4.6148E+02	6.5047E+06	1.0416E+04	1.9827E+04	9.5613E+04	5.2217E+02	5.8286E+03	6.4049E+05
6.7068E+02	4.0379E+02	6.3012E+06	1.0416E+04	1.3218E+04	8.5294E+04	5.2217E+02	5.3802E+03	1.0955E+06
6.7068E+02	3.4611E+02	6.6672E+06	1.0416E+04	6.6090E+03	8.0350E+05	5.2217E+02	4.9319E+03	1.4131E+06
6.7068E+02	2.8842E+02	6.4856E+06	1.0416E+04	0.0000E+00	5.0381E+06	5.2217E+02	4.4835E+03	1.6819E+06
6.7068E+02	2.3074E+02	5.3313E+06	2.9699E+03	3.0401E+05	1.6804E+00	5.2217E+02	4.0352E+03	2.3248E+06
6.7068E+02	1.7305E+02	4.7192E+06	2.9699E+03	2.8419E+05	1.6804E+00	5.2217E+02	3.5868E+03	2.9211E+06
6.7068E+02	1.1537E+02	7.0763E+06	2.9699E+03	2.7097E+05	1.6804E+00	5.2217E+02	3.1385E+03	3.4584E+06
6.7068E+02	5.7685E+01	2.0896E+07	2.9699E+03	1.9827E+05	5.5625E-02	5.2217E+02	2.6901E+03	4.6921E+06
6.7068E+02	0.0000E+00	3.3699E+07	2.9699E+03	1.9166E+05	5.5625E-02	5.2217E+02	2.2418E+03	5.8741E+06
6.0357E+02	2.4805E+03	5.0365E+01	2.9699E+03	1.7844E+05	1.1125E-01	5.2217E+02	1.7934E+03	7.3885E+06
6.0357E+02	2.4228E+03	7.2771E+00	2.9699E+03	1.7183E+05	1.7360E+00	5.2217E+02	1.3451E+03	7.9080E+06
6.0357E+02	2.3651E+03	4.0963E+01	2.9699E+03	1.6522E+05	1.1125E-01	5.2217E+02	8.9670E+02	9.2041E+06
6.0357E+02	2.3074E+03	2.1707E+03	2.9699E+03	1.5862E+05	5.5625E-02	5.2217E+02	4.4835E+02	2.1232E+07
6.0357E+02	2.2497E+03	1.4405E+03	2.9699E+03	1.5201E+05	2.3610E+00	5.2217E+02	0.0000E+00	4.5335E+07
6.0357E+02	2.1920E+03	1.1384E+03	2.9699E+03	1.4540E+05	6.2500E-01	-	1.5692E+04	5.5625E-02
6.0357E+02	2.1343E+03	1.6931E+03	2.9699E+03	1.3879E+05	5.5625E-02	-	1.5244E+04	2.8139E+00
6.0357E+02	2.0767E+03	3.8081E+03	2.9699E+03	1.3218E+05	1.8473E+00	-	1.4796E+04	1.7382E+02
6.0357E+02	2.0190E+03	2.5122E+03	2.9699E+03	1.2557E+05	4.1110E+00	-	1.4347E+04	3.8652E+03
6.0357E+02	1.9613E+03	3.1549E+03	2.9699E+03	1.1896E+05	2.1360E+00	-	1.3899E+04	7.5790E+03
6.0357E+02	1.9036E+03	4.0321E+03	2.9699E+03	1.1235E+05	6.4696E+03	-	1.3451E+04	9.8877E+03
6.0357E+02	1.8459E+03	9.7783E+03	2.9699E+03	1.0574E+05	1.9398E+04	-	1.3002E+04	1.3438E+04
6.0357E+02	1.7882E+03	9.7986E+03	2.9699E+03	9.9135E+04	3.2341E+04	-	1.2554E+04	3.8670E+04
6.0357E+02	1.7305E+03	1.1027E+04	2.9699E+03	9.2526E+04	1.9490E+04	-	1.2106E+04	4.4756E+04
6.0357E+02	1.6729E+03	1.5964E+04	2.9699E+03	8.5917E+04	1.2958E+04	-	1.1657E+04	7.8482E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.0357E+02	1.6152E+03	4.3145E+04	2.9699E+03	7.9308E+04	1.4653E+05	-	1.1209E+04	8.7219E+04
6.0357E+02	1.5575E+03	5.1773E+04	2.9699E+03	7.2699E+04	6.4718E+04	-	1.0760E+04	1.0869E+05
6.0357E+02	1.4998E+03	5.8518E+04	2.9699E+03	6.6090E+04	8.4186E+04	-	1.0312E+04	1.0297E+05
6.0357E+02	1.4421E+03	7.6786E+04	2.9699E+03	5.9481E+04	1.1033E+05	-	9.8637E+03	7.2602E+04
6.0357E+02	1.3844E+03	1.1960E+05	2.9699E+03	5.2872E+04	9.9427E+04	-	9.4154E+03	1.1659E+05
6.0357E+02	1.3268E+03	1.4657E+05	2.9699E+03	4.6263E+04	1.9681E+05	-	8.9670E+03	1.3140E+05
6.0357E+02	1.2691E+03	2.2837E+05	2.9699E+03	3.9654E+04	2.4570E+05	-	8.5187E+03	1.6769E+05
6.0357E+02	1.2114E+03	3.5414E+05	2.9699E+03	3.3045E+04	4.1225E+05	-	8.0703E+03	1.5536E+05
6.0357E+02	1.1537E+03	4.1710E+05	2.9699E+03	2.6436E+04	8.1241E+05	-	7.6220E+03	2.6581E+05
6.0357E+02	1.0960E+03	4.8919E+05	2.9699E+03	1.9827E+04	1.7437E+06	-	7.1736E+03	3.8613E+05
6.0357E+02	1.0383E+03	6.4495E+05	2.9699E+03	1.3218E+04	3.1202E+06	-	6.7253E+03	4.0721E+05
6.0357E+02	9.8064E+02	8.0983E+05	2.9699E+03	6.6090E+03	4.5748E+06	-	6.2769E+03	6.2994E+05
6.0357E+02	9.2296E+02	1.1032E+06	2.9699E+03	0.0000E+00	1.6862E+07	-	5.8286E+03	8.1690E+05
6.0357E+02	8.6527E+02	1.3260E+06	-	3.3045E+05	3.3608E+00	-	5.3802E+03	1.1495E+06
6.0357E+02	8.0759E+02	1.6776E+06	-	3.1723E+05	1.6804E+00	-	4.9319E+03	1.5199E+06
6.0357E+02	7.4990E+02	2.2550E+06	-	2.2470E+05	5.5625E-02	-	4.4835E+03	2.0669E+06
6.0357E+02	6.9222E+02	2.7622E+06	-	2.1810E+05	5.5625E-02	-	4.0352E+03	2.7864E+06
6.0357E+02	6.3453E+02	3.1791E+06	-	1.8505E+05	5.5625E-02	-	3.5868E+03	3.7019E+06
6.0357E+02	5.7685E+02	3.6293E+06	-	1.7183E+05	5.5625E-02	-	3.1385E+03	4.4229E+06
6.0357E+02	5.1916E+02	4.4903E+06	-	1.6522E+05	5.5625E-02	-	2.6901E+03	6.0417E+06
6.0357E+02	4.6148E+02	5.1347E+06	-	1.5201E+05	1.7360E+00	-	2.2418E+03	7.5379E+06
6.0357E+02	4.0379E+02	5.3739E+06	-	1.4540E+05	1.1125E-01	-	1.7934E+03	9.6918E+06
6.0357E+02	3.4611E+02	5.1297E+06	-	1.3879E+05	5.5625E-02	-	1.3451E+03	1.0301E+07
6.0357E+02	2.8842E+02	5.2879E+06	-	1.3218E+05	6.8063E-01	-	8.9670E+02	1.1458E+07
6.0357E+02	2.3074E+02	4.9307E+06	-	1.2557E+05	1.8473E+00	-	4.4835E+02	2.5389E+07
6.0357E+02	1.7305E+02	4.7360E+06	-	1.1896E+05	3.9031E+00	-	0.0000E+00	5.4234E+07
6.0357E+02	1.1537E+02	6.8037E+06	-	1.1235E+05	1.4459E+01	-	1.6589E+07	5.3025E+07

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.0357E+02	5.7685E+01	1.9765E+07	-	1.0574E+05	4.1410E+00	-	1.6141E+04	5.5253E+00
6.0357E+02	0.0000E+00	3.3890E+07	-	9.9135E+04	9.6554E+00	-	1.5692E+04	6.7414E+01
5.3646E+02	2.8842E+03	6.2500E-01	-	9.2526E+04	7.4318E+01	-	1.5244E+04	1.6434E+01
5.3646E+02	2.7689E+03	6.2500E-01	-	8.5917E+04	8.6065E+03	-	1.4796E+04	8.4429E+01
5.3646E+02	2.6535E+03	6.5105E+00	-	7.9308E+04	4.7694E+01	-	1.4347E+04	2.4431E+03
5.3646E+02	2.5958E+03	1.5373E+01	-	7.2699E+04	8.8824E+01	-	1.3899E+04	4.9059E+03
5.3646E+02	2.5381E+03	9.6403E+00	-	6.6090E+04	7.5819E+03	-	1.3451E+04	8.3367E+03
5.3646E+02	2.4805E+03	7.0597E+02	-	5.9481E+04	6.7532E+03	-	1.3002E+04	2.5814E+04
5.3646E+02	2.4228E+03	1.5373E+01	-	5.2872E+04	2.6439E+04	-	1.2554E+04	3.4689E+04
5.3646E+02	2.3651E+03	3.7478E+01	-	4.6263E+04	2.6580E+04	-	1.2106E+04	6.8671E+04
5.3646E+02	2.3074E+03	5.0988E+02	-	3.9654E+04	8.5458E+04	-	1.1657E+04	9.2741E+04
5.3646E+02	2.2497E+03	7.2134E+02	-	3.3045E+04	1.6845E+05	-	1.1209E+04	9.0476E+04
5.3646E+02	2.1920E+03	2.3725E+02	-	2.6436E+04	4.9645E+05	-	1.0760E+04	1.1141E+05
5.3646E+02	2.1343E+03	2.1290E+03	-	1.9827E+04	1.1242E+06	-	1.0312E+04	1.3032E+05
5.3646E+02	2.0767E+03	3.6435E+03	-	1.3218E+04	1.9570E+06	-	9.8637E+03	8.9443E+04
5.3646E+02	2.0190E+03	5.6603E+02	-	6.6090E+03	3.3600E+06	-	9.4154E+03	1.2987E+05
5.3646E+02	1.9613E+03	1.8201E+03	-	0.0000E+00	9.7627E+06	-	8.9670E+03	1.5599E+05
5.3646E+02	1.9036E+03	2.4496E+03	-	3.0401E+05	1.6804E+00	-	8.5187E+03	1.3939E+05
5.3646E+02	1.8459E+03	6.9200E+03	-	2.8419E+05	1.7500E+00	-	8.0703E+03	1.5936E+05
5.3646E+02	1.7882E+03	7.6026E+03	-	2.6436E+05	1.7500E+00	-	7.6220E+03	2.4924E+05
5.3646E+02	1.7305E+03	8.8107E+03	-	2.5775E+05	1.8056E+00	-	7.1736E+03	3.0304E+05
5.3646E+02	1.6729E+03	1.3810E+04	-	2.3792E+05	5.5625E-02	-	6.7253E+03	4.4042E+05
5.3646E+02	1.6152E+03	2.2811E+04	-	2.1810E+05	6.2500E-01	-	6.2769E+03	5.8763E+05
5.3646E+02	1.5575E+03	2.6768E+04	-	2.1149E+05	5.5625E-02	-	5.8286E+03	7.9725E+05
5.3646E+02	1.4998E+03	5.1462E+04	-	1.9827E+05	1.1125E-01	-	5.3802E+03	1.1957E+06
5.3646E+02	1.4421E+03	6.5495E+04	-	1.9166E+05	5.5625E-02	-	4.9319E+03	1.5024E+06
5.3646E+02	1.3844E+03	7.7491E+04	-	1.8505E+05	1.1125E-01	-	4.4835E+03	2.0430E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.3646E+02	1.3268E+03	1.0142E+05	-	1.7844E+05	6.8063E-01	-	4.0352E+03	2.4429E+06
5.3646E+02	1.2691E+03	1.5203E+05	-	1.6522E+05	5.5625E-02	-	3.5868E+03	3.1945E+06
5.3646E+02	1.2114E+03	1.6356E+05	-	1.5862E+05	5.5625E-02	-	3.1385E+03	4.2419E+06
5.3646E+02	1.1537E+03	2.0685E+05	-	1.5201E+05	1.2053E-01	-	2.6901E+03	5.6417E+06
5.3646E+02	1.0960E+03	2.9277E+05	-	1.4540E+05	1.1589E-01	-	2.2418E+03	6.4285E+06
5.3646E+02	1.0383E+03	4.2026E+05	-	1.3879E+05	9.7561E+00	-	1.7934E+03	6.9317E+06
5.3646E+02	9.8064E+02	5.0284E+05	-	1.3218E+05	3.3375E-01	-	1.3451E+03	7.3915E+06
5.3646E+02	9.2296E+02	5.7474E+05	-	1.2557E+05	1.3322E+01	-	8.9670E+02	9.8510E+06
5.3646E+02	8.6527E+02	7.4130E+05	-	1.1896E+05	1.4100E+01	-	4.4835E+02	2.0513E+07
5.3646E+02	8.0759E+02	1.0014E+06	-	1.1235E+05	4.8025E+01	-	0.0000E+00	4.3944E+07
5.3646E+02	7.4990E+02	1.1273E+06	-	1.0574E+05	9.4534E+01	-	1.8831E+04	5.5625E-02
5.3646E+02	6.9222E+02	1.3085E+06	-	9.9135E+04	1.1693E+02	-	1.7934E+04	1.0420E+02
5.3646E+02	6.3453E+02	1.6005E+06	-	9.2526E+04	2.2550E+03	-	1.7037E+04	1.3021E+00
5.3646E+02	5.7685E+02	1.8723E+06	-	8.5917E+04	1.1760E+02	-	1.6589E+04	9.2025E-02
5.3646E+02	5.1916E+02	2.2997E+06	-	7.9308E+04	1.5638E+02	-	1.6141E+04	6.0271E+00
5.3646E+02	4.6148E+02	2.2043E+06	-	7.2699E+04	3.3492E+03	-	1.5692E+04	2.1116E+00
5.3646E+02	4.0379E+02	2.6603E+06	-	6.6090E+04	7.4083E+03	-	1.5244E+04	6.6555E+00
5.3646E+02	3.4611E+02	3.4713E+06	-	5.9481E+04	1.4526E+04	-	1.4796E+04	1.9338E+02
5.3646E+02	2.8842E+02	3.3904E+06	-	5.2872E+04	3.4663E+04	-	1.4347E+04	1.2869E+03
5.3646E+02	2.3074E+02	4.7228E+06	-	4.6263E+04	4.7967E+04	-	1.3899E+04	1.3514E+03
5.3646E+02	1.7305E+02	4.3058E+06	-	3.9654E+04	1.6078E+05	-	1.3451E+04	7.3760E+03
5.3646E+02	1.1537E+02	6.8141E+06	-	3.3045E+04	3.9652E+05	-	1.3002E+04	9.2217E+03
5.3646E+02	5.7685E+01	2.0613E+07	-	2.6436E+04	7.7187E+05	-	1.2554E+04	1.1542E+04
5.3646E+02	0.0000E+00	3.8349E+07	-	1.9827E+04	1.4693E+06	-	1.2106E+04	2.5535E+04
4.6935E+02	2.5958E+03	6.2500E-01	-	1.3218E+04	1.9108E+06	-	1.1657E+04	3.0981E+04
4.6935E+02	2.4805E+03	7.0597E+02	-	6.6090E+03	3.9982E+06	-	1.1209E+04	3.4281E+04
4.6935E+02	2.4228E+03	7.0000E+02	-	0.0000E+00	8.7243E+06	-	1.0760E+04	2.0375E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6935E+02	2.3651E+03	1.8532E+02	-	3.2384E+05	3.3608E+00	-	1.0312E+04	8.4496E+04
4.6935E+02	2.3074E+03	4.4439E+01	-	3.1062E+05	1.6804E+00	-	9.8637E+03	5.7765E+04
4.6935E+02	2.2497E+03	5.5935E+00	-	2.9740E+05	8.1909E+00	-	9.4154E+03	6.7063E+04
4.6935E+02	2.1920E+03	1.8767E+02	-	2.9079E+05	1.6804E+00	-	8.9670E+03	1.3155E+05
4.6935E+02	2.1343E+03	4.0252E+02	-	2.7758E+05	8.6804E+00	-	8.5187E+03	1.0718E+05
4.6935E+02	2.0767E+03	8.0771E+02	-	2.5775E+05	7.0000E+00	-	8.0703E+03	1.3325E+05
4.6935E+02	2.0190E+03	4.2131E+02	-	2.5114E+05	3.5000E+00	-	7.6220E+03	2.2753E+05
4.6935E+02	1.9613E+03	1.5387E+03	-	2.4453E+05	6.2500E-01	-	7.1736E+03	2.8269E+05
4.6935E+02	1.9036E+03	3.5833E+03	-	2.3792E+05	6.2500E-01	-	6.7253E+03	3.9141E+05
4.6935E+02	1.8459E+03	4.2603E+03	-	2.3131E+05	1.7500E+00	-	6.2769E+03	5.8339E+05
4.6935E+02	1.7882E+03	4.6364E+03	-	2.1810E+05	1.8056E+00	-	5.8286E+03	7.8376E+05
4.6935E+02	1.7305E+03	5.3859E+03	-	2.1149E+05	5.5625E-02	-	5.3802E+03	9.5780E+05
4.6935E+02	1.6729E+03	4.7831E+03	-	1.9827E+05	6.8063E-01	-	4.9319E+03	1.2124E+06
4.6935E+02	1.6152E+03	9.7006E+03	-	1.8505E+05	1.1125E-01	-	4.4835E+03	1.6474E+06
4.6935E+02	1.5575E+03	7.1888E+03	-	1.7844E+05	1.6688E-01	-	4.0352E+03	2.2022E+06
4.6935E+02	1.4998E+03	9.6746E+03	-	1.7183E+05	6.8063E-01	-	3.5868E+03	2.7536E+06
4.6935E+02	1.4421E+03	2.1375E+04	-	1.5862E+05	1.1125E-01	-	3.1385E+03	3.0393E+06
4.6935E+02	1.3844E+03	1.9156E+04	-	1.5201E+05	7.3625E-01	-	2.6901E+03	3.9594E+06
4.6935E+02	1.3268E+03	3.8419E+04	-	1.4540E+05	2.1487E-01	-	2.2418E+03	4.4668E+06
4.6935E+02	1.2691E+03	3.7429E+04	-	1.3879E+05	1.9391E-01	-	1.7934E+03	4.7991E+06
4.6935E+02	1.2114E+03	5.3528E+04	-	1.3218E+05	1.4582E+01	-	1.3451E+03	5.0121E+06
4.6935E+02	1.1537E+03	5.9006E+04	-	1.2557E+05	9.9230E+00	-	8.9670E+02	6.6706E+06
4.6935E+02	1.0960E+03	7.7855E+04	-	1.1896E+05	3.5171E+01	-	4.4835E+02	1.4827E+07
4.6935E+02	1.0383E+03	1.0789E+05	-	1.1235E+05	8.9205E+01	-	0.0000E+00	3.2764E+07
4.6935E+02	9.8064E+02	1.2992E+05	-	1.0574E+05	2.1741E+03	-	1.6141E+04	2.7366E+00
4.6935E+02	9.2296E+02	1.6706E+05	-	9.9135E+04	2.2594E+03	-	1.5692E+04	9.2025E-02
4.6935E+02	8.6527E+02	2.1750E+05	-	9.2526E+04	1.8191E+02	-	1.5244E+04	9.1896E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6935E+02	8.0759E+02	2.7894E+05	- 1.9369E+04	8.5917E+04	1.5049E+03	- 1.7167E+03	1.4796E+04	1.0412E+03
4.6935E+02	7.4990E+02	2.8030E+05	- 1.9369E+04	7.9308E+04	3.9047E+03	- 1.7167E+03	1.4347E+04	7.3655E+02
4.6935E+02	6.9222E+02	4.0719E+05	- 1.9369E+04	7.2699E+04	5.2102E+03	- 1.7167E+03	1.3899E+04	2.1416E+02
4.6935E+02	6.3453E+02	4.1674E+05	- 1.9369E+04	6.6090E+04	6.4859E+03	- 1.7167E+03	1.3451E+04	1.7516E+02
4.6935E+02	5.7685E+02	4.9206E+05	- 1.9369E+04	5.9481E+04	2.1299E+04	- 1.7167E+03	1.3002E+04	5.1513E+02
4.6935E+02	5.1916E+02	5.7831E+05	- 1.9369E+04	5.2872E+04	3.0358E+04	- 1.7167E+03	1.2554E+04	6.0164E+02
4.6935E+02	4.6148E+02	1.0022E+06	- 1.9369E+04	4.6263E+04	5.5166E+04	- 1.7167E+03	1.2106E+04	6.4006E+02
4.6935E+02	4.0379E+02	1.4904E+06	- 1.9369E+04	3.9654E+04	1.7311E+05	- 1.7167E+03	1.1657E+04	4.9957E+03
4.6935E+02	3.4611E+02	2.3251E+06	- 1.9369E+04	3.3045E+04	5.6146E+05	- 1.7167E+03	1.1209E+04	9.4056E+03
4.6935E+02	2.8842E+02	3.4726E+06	- 1.9369E+04	2.6436E+04	1.5404E+06	- 1.7167E+03	1.0760E+04	1.9396E+04
4.6935E+02	2.3074E+02	5.7338E+06	- 1.9369E+04	1.9827E+04	3.7155E+06	- 1.7167E+03	1.0312E+04	2.1587E+04
4.6935E+02	1.7305E+02	6.9551E+06	- 1.9369E+04	1.3218E+04	6.1225E+06	- 1.7167E+03	9.8637E+03	2.1351E+04
4.6935E+02	1.1537E+02	9.0837E+06	- 1.9369E+04	6.6090E+03	1.1170E+07	- 1.7167E+03	9.4154E+03	2.7038E+04
4.6935E+02	5.7685E+01	2.2454E+07	- 1.9369E+04	0.0000E+00	2.0092E+07	- 1.7167E+03	8.9670E+03	4.5564E+04
4.6935E+02	0.0000E+00	4.4192E+07	- 2.6816E+04	3.1723E+05	5.0412E+00	- 1.7167E+03	8.5187E+03	7.3700E+04
4.0224E+02	2.7112E+03	5.5625E-02	- 2.6816E+04	3.1062E+05	6.5105E+00	- 1.7167E+03	8.0703E+03	8.5326E+04
4.0224E+02	2.5958E+03	1.6804E+00	- 2.6816E+04	3.0401E+05	3.4304E+00	- 1.7167E+03	7.6220E+03	1.4272E+05
4.0224E+02	2.5381E+03	6.5105E+00	- 2.6816E+04	2.9079E+05	1.6804E+00	- 1.7167E+03	7.1736E+03	1.5329E+05
4.0224E+02	2.4228E+03	2.4103E+01	- 2.6816E+04	2.8419E+05	1.6804E+00	- 1.7167E+03	6.7253E+03	2.8106E+05
4.0224E+02	2.3651E+03	7.4443E+02	- 2.6816E+04	2.7758E+05	1.3861E+01	- 1.7167E+03	6.2769E+03	4.3884E+05
4.0224E+02	2.3074E+03	3.4860E+00	- 2.6816E+04	2.7097E+05	8.6804E+00	- 1.7167E+03	5.8286E+03	6.5699E+05
4.0224E+02	2.2497E+03	2.5112E+02	- 2.6816E+04	2.6436E+05	1.0066E+01	- 1.7167E+03	5.3802E+03	8.8294E+05
4.0224E+02	2.1920E+03	1.3041E+01	- 2.6816E+04	2.5775E+05	5.5625E-02	- 1.7167E+03	4.9319E+03	1.1138E+06
4.0224E+02	2.1343E+03	1.9671E+02	- 2.6816E+04	2.5114E+05	3.5000E+00	- 1.7167E+03	4.4835E+03	1.4064E+06
4.0224E+02	2.0767E+03	1.0227E+01	- 2.6816E+04	2.4453E+05	1.7500E+00	- 1.7167E+03	4.0352E+03	1.6198E+06
4.0224E+02	2.0190E+03	1.7735E+01	- 2.6816E+04	2.3792E+05	3.5000E+00	- 1.7167E+03	3.5868E+03	2.1554E+06
4.0224E+02	1.9613E+03	1.0820E+01	- 2.6816E+04	2.3131E+05	6.5105E+00	- 1.7167E+03	3.1385E+03	2.0242E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.0224E+02	1.9036E+03	9.1231E+02	-	2.1810E+05	6.8063E-01	-	2.6901E+03	2.9316E+06
4.0224E+02	1.8459E+03	2.4168E+03	-	2.1149E+05	1.2500E+00	-	2.2418E+03	2.9743E+06
4.0224E+02	1.7882E+03	2.8168E+02	-	2.0488E+05	1.1125E-01	-	1.7934E+03	2.8498E+06
4.0224E+02	1.7305E+03	3.6805E+03	-	1.9166E+05	5.5625E-02	-	1.3451E+03	3.0617E+06
4.0224E+02	1.6729E+03	3.8374E+02	-	1.8505E+05	1.9169E+00	-	8.9670E+02	4.4496E+06
4.0224E+02	1.6152E+03	3.2767E+03	-	1.7844E+05	5.5625E-02	-	4.4835E+02	1.0884E+07
4.0224E+02	1.5575E+03	4.3214E+03	-	1.7183E+05	1.1125E-01	-	0.0000E+00	2.1127E+07
4.0224E+02	1.4998E+03	2.0584E+03	-	1.5862E+05	6.8063E-01	-	1.8831E+04	1.6688E-01
4.0224E+02	1.4421E+03	2.4525E+03	-	1.5201E+05	6.8063E-01	-	1.8382E+04	1.1125E-01
4.0224E+02	1.3844E+03	3.1057E+03	-	1.4540E+05	2.7609E+01	-	1.7934E+04	6.2500E-01
4.0224E+02	1.3268E+03	8.9374E+03	-	1.3879E+05	6.6282E+00	-	1.6589E+04	9.2025E-02
4.0224E+02	1.2691E+03	5.1262E+03	-	1.3218E+05	1.3132E+01	-	1.6141E+04	1.7678E+01
4.0224E+02	1.2114E+03	8.8346E+03	-	1.2557E+05	1.1197E+02	-	1.5692E+04	3.8155E+00
4.0224E+02	1.1537E+03	1.1983E+04	-	1.1896E+05	3.0558E+01	-	1.5244E+04	3.2125E+00
4.0224E+02	1.0960E+03	1.6297E+04	-	1.1235E+05	2.6349E+01	-	1.4796E+04	8.7930E+00
4.0224E+02	1.0383E+03	2.4225E+04	-	1.0574E+05	1.1246E+03	-	1.4347E+04	1.1178E+02
4.0224E+02	9.8064E+02	2.5056E+04	-	9.9135E+04	2.7227E+01	-	1.3899E+04	1.0839E+02
4.0224E+02	9.2296E+02	3.5464E+04	-	9.2526E+04	3.7516E+02	-	1.3451E+04	7.5334E+01
4.0224E+02	8.6527E+02	6.1550E+04	-	8.5917E+04	6.8167E+02	-	1.3002E+04	1.5035E+02
4.0224E+02	8.0759E+02	5.4724E+04	-	7.9308E+04	4.1112E+03	-	1.2554E+04	2.6564E+02
4.0224E+02	7.4990E+02	6.9453E+04	-	7.2699E+04	1.6613E+04	-	1.2106E+04	1.4880E+02
4.0224E+02	6.9222E+02	1.0385E+05	-	6.6090E+04	1.2325E+04	-	1.1657E+04	9.6831E+01
4.0224E+02	6.3453E+02	1.4459E+05	-	5.9481E+04	3.2122E+04	-	1.1209E+04	6.2554E+02
4.0224E+02	5.7685E+02	2.1391E+05	-	5.2872E+04	6.2185E+04	-	1.0760E+04	1.9039E+03
4.0224E+02	5.1916E+02	2.8267E+05	-	4.6263E+04	1.1976E+05	-	1.0312E+04	4.0141E+03
4.0224E+02	4.6148E+02	5.1338E+05	-	3.9654E+04	2.0338E+05	-	9.8637E+03	2.2803E+03
4.0224E+02	4.0379E+02	9.4280E+05	-	3.3045E+04	5.5383E+05	-	9.4154E+05	1.0707E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.0224E+02	3.4611E+02	1.6033E+06	-	2.6436E+04	1.5688E+06	-	8.9670E+03	1.3834E+04
4.0224E+02	2.8842E+02	3.4110E+06	-	1.9827E+04	4.5484E+06	-	8.5187E+03	2.5382E+04
4.0224E+02	2.3074E+02	5.5487E+06	-	1.3218E+04	7.8764E+06	-	8.0703E+03	3.3908E+04
4.0224E+02	1.7305E+02	7.6999E+06	-	6.6090E+03	1.4339E+07	-	7.6220E+03	8.9360E+04
4.0224E+02	1.1537E+02	9.5412E+06	-	0.0000E+00	2.4278E+07	-	7.1736E+03	1.3308E+05
4.0224E+02	5.7685E+01	1.8453E+07	-	3.0401E+05	5.0412E+00	-	6.7253E+03	1.9967E+05
4.0224E+02	0.0000E+00	4.4828E+07	-	2.9740E+05	1.6804E+00	-	6.2769E+03	2.2407E+05
3.3513E+02	2.5381E+03	1.6804E+00	-	2.9079E+05	3.3608E+00	-	5.8286E+03	3.7141E+05
3.3513E+02	2.4228E+03	2.4552E+00	-	2.8419E+05	6.5105E+00	-	5.3802E+03	4.8249E+05
3.3513E+02	2.3651E+03	5.2500E+00	-	2.7758E+05	1.7500E+00	-	4.9319E+03	8.3368E+05
3.3513E+02	2.3074E+03	3.4304E+00	-	2.7097E+05	8.6108E+00	-	4.4835E+03	1.1134E+06
3.3513E+02	2.2497E+03	1.1691E+01	-	2.6436E+05	9.8713E+00	-	4.0352E+03	1.3091E+06
3.3513E+02	2.1920E+03	2.1212E+01	-	2.5775E+05	1.7500E+00	-	3.5868E+03	1.5781E+06
3.3513E+02	2.1343E+03	4.4566E+01	-	2.5114E+05	1.6804E+00	-	3.1385E+03	1.8194E+06
3.3513E+02	2.0767E+03	1.2622E+01	-	2.4453E+05	5.8750E+00	-	2.6901E+03	2.1624E+06
3.3513E+02	2.0190E+03	4.3651E+01	-	2.3792E+05	3.5556E+00	-	2.2418E+03	1.8291E+06
3.3513E+02	1.9613E+03	7.0137E+00	-	2.3131E+05	8.3161E+00	-	1.7934E+03	1.9916E+06
3.3513E+02	1.9036E+03	1.9549E+01	-	2.2470E+05	6.2500E-01	-	1.3451E+03	2.1237E+06
3.3513E+02	1.8459E+03	7.1075E+00	-	2.1810E+05	1.1125E-01	-	8.9670E+02	3.0372E+06
3.3513E+02	1.7882E+03	3.8443E+01	-	2.1149E+05	6.2500E-01	-	4.4835E+02	7.5251E+06
3.3513E+02	1.7305E+03	3.7549E+01	-	1.9827E+05	3.0000E+00	-	0.0000E+00	1.4058E+07
3.3513E+02	1.6729E+03	1.2449E+02	-	1.9166E+05	6.8063E-01	-	1.9279E+04	5.5625E-02
3.3513E+02	1.6152E+03	5.0491E+01	-	1.8505E+05	1.2500E+00	-	1.8831E+04	6.2500E-01
3.3513E+02	1.5575E+03	1.1926E+02	-	1.7844E+05	1.1125E-01	-	1.8382E+04	5.5625E-02
3.3513E+02	1.4998E+03	4.1072E+02	-	1.7183E+05	2.1284E+00	-	1.7934E+04	5.5625E-02
3.3513E+02	1.4421E+03	5.1200E+02	-	1.6522E+05	1.3851E+01	-	1.6589E+04	1.6804E+00
3.3513E+02	1.3844E+03	6.2520E+02	-	1.5862E+05	2.4672E+00	-	1.6141E+04	1.6804E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.3513E+02	1.3268E+03	7.3186E+02	-	1.5201E+05	1.3612E+00	-	1.5692E+04	9.2025E-02
3.3513E+02	1.2691E+03	1.9524E+03	-	1.4540E+05	7.7265E-01	-	1.5244E+04	3.4291E+01
3.3513E+02	1.2114E+03	2.8362E+03	-	1.3879E+05	2.1042E+01	-	1.4796E+04	6.9545E+00
3.3513E+02	1.1537E+03	2.6587E+03	-	1.3218E+05	3.4049E+01	-	1.4347E+04	8.4906E+00
3.3513E+02	1.0960E+03	3.2041E+03	-	1.2557E+05	2.1975E+01	-	1.3899E+04	2.0454E+01
3.3513E+02	1.0383E+03	4.1822E+03	-	1.1896E+05	1.5466E+02	-	1.3451E+04	2.9085E+01
3.3513E+02	9.8064E+02	1.0166E+04	-	1.1235E+05	2.7839E+02	-	1.3002E+04	2.2979E+01
3.3513E+02	9.2296E+02	1.7300E+04	-	1.0574E+05	2.1071E+02	-	1.2554E+04	1.2494E+02
3.3513E+02	8.6527E+02	1.7359E+04	-	9.9135E+04	5.4179E+02	-	1.2106E+04	6.0683E+01
3.3513E+02	8.0759E+02	4.2237E+04	-	9.2526E+04	1.8063E+03	-	1.1657E+04	5.8820E+01
3.3513E+02	7.4990E+02	4.1039E+04	-	8.5917E+04	3.6799E+03	-	1.1209E+04	6.6981E+01
3.3513E+02	6.9222E+02	6.2473E+04	-	7.9308E+04	4.6910E+03	-	1.0760E+04	3.5502E+02
3.3513E+02	6.3453E+02	1.2776E+05	-	7.2699E+04	1.0016E+04	-	1.0312E+04	1.9890E+02
3.3513E+02	5.7685E+02	2.1605E+05	-	6.6090E+04	1.9784E+04	-	9.8637E+03	6.5928E+02
3.3513E+02	5.1916E+02	2.8715E+05	-	5.9481E+04	1.1533E+04	-	9.4154E+03	1.9805E+02
3.3513E+02	4.6148E+02	6.5950E+05	-	5.2872E+04	2.3038E+04	-	8.9670E+03	1.1236E+03
3.3513E+02	4.0379E+02	1.2281E+06	-	4.6263E+04	1.0616E+05	-	8.5187E+03	5.5621E+03
3.3513E+02	3.4611E+02	2.1758E+06	-	3.9654E+04	1.7486E+05	-	8.0703E+03	5.8115E+03
3.3513E+02	2.8842E+02	3.9753E+06	-	3.3045E+04	5.1177E+05	-	7.6220E+03	2.0737E+04
3.3513E+02	2.3074E+02	6.5158E+06	-	2.6436E+04	1.3437E+06	-	7.1736E+03	2.0313E+04
3.3513E+02	1.7305E+02	8.8033E+06	-	1.9827E+04	3.2112E+06	-	6.7253E+03	3.3515E+04
3.3513E+02	1.1537E+02	9.7724E+06	-	1.3218E+04	5.8009E+06	-	6.2769E+03	1.1675E+05
3.3513E+02	5.7685E+01	1.3792E+07	-	6.6090E+03	1.0702E+07	-	5.8286E+03	1.9651E+05
3.3513E+02	0.0000E+00	3.7433E+07	-	0.0000E+00	1.9089E+07	-	5.3802E+03	2.9087E+05
2.6801E+02	2.7112E+03	1.6804E+00	-	3.1062E+05	1.6804E+00	-	4.9319E+03	4.9522E+05
2.6801E+02	2.6535E+03	3.4304E+00	-	2.9079E+05	1.6451E+01	-	4.4835E+03	5.3774E+05
2.6801E+02	2.5958E+03	9.9409E+00	-	2.8419E+05	3.4304E+00	-	4.0352E+05	9.3511E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.6801E+02	2.5381E+03	1.6804E+00	-	2.7758E+05	3.5000E+00	-	3.5868E+03	8.9164E+05
2.6801E+02	2.4805E+03	9.8713E+00	-	2.7097E+05	5.1804E+00	-	3.1385E+03	1.0626E+06
2.6801E+02	2.4228E+03	1.8132E+01	-	2.6436E+05	1.6804E+00	-	2.6901E+03	1.3047E+06
2.6801E+02	2.3651E+03	3.3608E+00	-	2.5775E+05	1.1832E+01	-	2.2418E+03	1.2690E+06
2.6801E+02	2.3074E+03	1.8826E+01	-	2.5114E+05	1.7076E+01	-	1.7934E+03	1.1500E+06
2.6801E+02	2.2497E+03	1.7360E+00	-	2.4453E+05	3.4304E+00	-	1.3451E+03	1.1611E+06
2.6801E+02	2.1920E+03	5.3612E+00	-	2.3792E+05	6.2500E-01	-	8.9670E+02	2.2432E+06
2.6801E+02	2.1343E+03	2.4723E+00	-	2.3131E+05	1.1760E+01	-	4.4835E+02	4.6164E+06
2.6801E+02	2.0767E+03	1.6632E+01	-	2.2470E+05	1.7500E+00	-	0.0000E+00	9.2205E+06
2.6801E+02	2.0190E+03	2.7537E+02	-	2.1810E+05	1.7500E+00	-	1.9279E+04	5.5625E-02
2.6801E+02	1.9613E+03	7.5279E+00	-	2.1149E+05	1.8612E+00	-	1.6589E+04	6.2500E-01
2.6801E+02	1.9036E+03	4.5314E+01	-	2.0488E+05	5.5625E-02	-	1.5244E+04	2.0099E+00
2.6801E+02	1.8459E+03	3.5547E+01	-	1.9827E+05	1.4984E+01	-	1.4796E+04	1.1691E+00
2.6801E+02	1.7882E+03	4.9165E+01	-	1.9166E+05	3.1062E+01	-	1.4347E+04	1.8744E+01
2.6801E+02	1.7305E+03	1.4169E+00	-	1.8505E+05	2.5247E+01	-	1.3899E+04	1.0529E+02
2.6801E+02	1.6729E+03	3.8870E+01	-	1.7844E+05	1.3998E+00	-	1.3451E+04	8.9293E+00
2.6801E+02	1.6152E+03	5.2321E+01	-	1.7183E+05	3.9262E+00	-	1.3002E+04	7.0182E+00
2.6801E+02	1.5575E+03	2.2151E+01	-	1.6522E+05	7.2862E-01	-	1.2554E+04	4.8751E+00
2.6801E+02	1.4998E+03	1.5029E+02	-	1.5862E+05	6.8063E-01	-	1.2106E+04	6.5652E+00
2.6801E+02	1.4421E+03	6.7124E+01	-	1.5201E+05	1.4700E+01	-	1.1657E+04	2.5887E+00
2.6801E+02	1.3844E+03	1.9155E+02	-	1.4540E+05	4.3969E+00	-	1.1209E+04	8.0058E+00
2.6801E+02	1.3268E+03	2.3455E+02	-	1.3879E+05	2.7730E+01	-	1.0760E+04	1.3659E+00
2.6801E+02	1.2691E+03	2.4272E+02	-	1.3218E+05	2.0205E+01	-	1.0312E+04	2.1135E+02
2.6801E+02	1.2114E+03	4.4186E+02	-	1.2557E+05	2.0669E+02	-	9.8637E+03	1.6260E+01
2.6801E+02	1.1537E+03	6.3684E+02	-	1.1896E+05	2.2963E+02	-	9.4154E+03	5.7386E+01
2.6801E+02	1.0960E+03	7.8768E+02	-	1.1235E+05	2.0462E+02	-	8.9670E+03	2.7869E+03
2.6801E+02	1.0383E+03	1.0702E+03	-	1.0574E+05	1.2148E+03	-	8.5187E+05	1.5087E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.6801E+02	9.8064E+02	2.0509E+03	-	9.9135E+04	1.2979E+03	-	8.0703E+03	1.2482E+03
2.6801E+02	9.2296E+02	3.6847E+03	-	9.2526E+04	1.4110E+03	-	7.6220E+03	5.1921E+03
2.6801E+02	8.6527E+02	7.5367E+03	-	8.5917E+04	2.0340E+03	-	7.1736E+03	3.7776E+03
2.6801E+02	8.0759E+02	7.9084E+03	-	7.9308E+04	2.5038E+03	-	6.7253E+03	1.3751E+04
2.6801E+02	7.4990E+02	8.0926E+03	-	7.2699E+04	3.7055E+03	-	6.2769E+03	2.3142E+04
2.6801E+02	6.9222E+02	2.1024E+04	-	6.6090E+04	9.8050E+03	-	5.8286E+03	5.3593E+04
2.6801E+02	6.3453E+02	4.4775E+04	-	5.9481E+04	1.6258E+04	-	5.3802E+03	9.4536E+04
2.6801E+02	5.7685E+02	1.3003E+05	-	5.2872E+04	4.9397E+04	-	4.9319E+03	1.5254E+05
2.6801E+02	5.1916E+02	2.0105E+05	-	4.6263E+04	1.2880E+05	-	4.4835E+03	3.3216E+05
2.6801E+02	4.6148E+02	3.9677E+05	-	3.9654E+04	3.0065E+05	-	4.0352E+03	4.1298E+05
2.6801E+02	4.0379E+02	9.5047E+05	-	3.3045E+04	7.7293E+05	-	3.5868E+03	5.6543E+05
2.6801E+02	3.4611E+02	1.6018E+06	-	2.6436E+04	1.7295E+06	-	3.1385E+03	6.5718E+05
2.6801E+02	2.8842E+02	3.3483E+06	-	1.9827E+04	3.0465E+06	-	2.6901E+03	6.8695E+05
2.6801E+02	2.3074E+02	5.4489E+06	-	1.3218E+04	4.0380E+06	-	2.2418E+03	7.0331E+05
2.6801E+02	1.7305E+02	7.5524E+06	-	6.6090E+03	8.6015E+06	-	1.7934E+03	6.9394E+05
2.6801E+02	1.1537E+02	9.4190E+06	-	0.0000E+00	1.2270E+07	-	1.3451E+03	7.5245E+05
2.6801E+02	5.7685E+01	1.2683E+07	-	3.0401E+05	3.3608E+00	-	8.9670E+02	1.1465E+06
2.6801E+02	0.0000E+00	3.7962E+07	-	2.9079E+05	6.5105E+00	-	4.4835E+02	3.1267E+06
2.0090E+02	2.7689E+03	1.6804E+00	-	2.8419E+05	8.1909E+00	-	0.0000E+00	5.5964E+06
2.0090E+02	2.6535E+03	3.4304E+00	-	2.7758E+05	1.6382E+01	-	2.2418E+04	5.5625E-02
2.0090E+02	2.4805E+03	3.3608E+00	-	2.7097E+05	3.3608E+00	-	1.9279E+04	1.6804E+00
2.0090E+02	2.4228E+03	5.1108E+00	-	2.6436E+05	3.4304E+00	-	1.7486E+04	5.3640E-01
2.0090E+02	2.3651E+03	8.1909E+00	-	2.5775E+05	2.3031E+01	-	1.7037E+04	5.3640E-01
2.0090E+02	2.3074E+03	5.1108E+00	-	2.5114E+05	3.3608E+00	-	1.5692E+04	5.5625E-02
2.0090E+02	2.2497E+03	7.4718E+00	-	2.4453E+05	1.1209E+01	-	1.5244E+04	2.3967E-01
2.0090E+02	2.1920E+03	3.6112E+00	-	2.3792E+05	1.7500E+00	-	1.4347E+04	2.0099E+00
2.0090E+02	2.1343E+03	5.4169E+00	-	2.3131E+05	1.7500E+00	-	1.3899E+04	1.5005E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.0090E+02	2.0767E+03	8.4274E+00	-	2.2470E+05	4.3123E+00	-	1.2554E+04	1.6804E+00
2.0090E+02	2.0190E+03	5.2360E+00	-	2.1810E+05	1.3085E+01	-	1.2106E+04	7.7238E+00
2.0090E+02	1.9613E+03	7.9188E-01	-	2.1149E+05	9.5846E+00	-	1.1657E+04	3.1301E+00
2.0090E+02	1.9036E+03	6.6217E+00	-	2.0488E+05	2.3886E+00	-	1.1209E+04	3.4164E+00
2.0090E+02	1.8459E+03	2.1504E+01	-	1.9827E+05	7.0149E+00	-	1.0760E+04	6.8063E-01
2.0090E+02	1.7882E+03	2.6320E+01	-	1.9166E+05	3.2040E+00	-	1.0312E+04	2.1672E+00
2.0090E+02	1.7305E+03	3.0941E+01	-	1.8505E+05	1.2922E+01	-	9.8637E+03	6.8063E-01
2.0090E+02	1.6729E+03	6.6736E+01	-	1.7844E+05	5.5625E-02	-	9.4154E+03	1.1172E+02
2.0090E+02	1.6152E+03	5.3571E+01	-	1.7183E+05	1.1886E+01	-	8.9670E+03	4.4460E+01
2.0090E+02	1.5575E+03	6.6776E+01	-	1.5862E+05	7.7480E-01	-	8.5187E+03	8.4848E+00
2.0090E+02	1.4998E+03	1.5419E+02	-	1.5201E+05	3.9412E+01	-	8.0703E+03	3.6918E+01
2.0090E+02	1.4421E+03	1.1482E+02	-	1.4540E+05	3.2641E+01	-	7.6220E+03	9.1980E+02
2.0090E+02	1.3844E+03	8.4710E+01	-	1.3879E+05	2.2378E+00	-	7.1736E+03	2.3580E+02
2.0090E+02	1.3268E+03	1.0834E+02	-	1.3218E+05	3.1095E+01	-	6.7253E+03	2.1502E+03
2.0090E+02	1.2691E+03	2.7012E+02	-	1.2557E+05	2.9162E+02	-	6.2769E+03	4.6258E+03
2.0090E+02	1.2114E+03	1.2982E+02	-	1.1896E+05	3.4338E+02	-	5.8286E+03	1.4601E+04
2.0090E+02	1.1537E+03	2.3415E+02	-	1.1235E+05	5.6197E+02	-	5.3802E+03	1.6075E+04
2.0090E+02	1.0960E+03	4.2761E+02	-	1.0574E+05	5.7182E+02	-	4.9319E+03	2.7096E+04
2.0090E+02	1.0383E+03	2.9648E+02	-	9.9135E+04	6.5474E+02	-	4.4835E+03	4.8990E+04
2.0090E+02	9.8064E+02	5.5731E+02	-	9.2526E+04	1.9653E+03	-	4.0352E+03	1.0663E+05
2.0090E+02	9.2296E+02	8.8082E+02	-	8.5917E+04	4.5670E+03	-	3.5868E+03	1.7379E+05
2.0090E+02	8.6527E+02	1.1952E+03	-	7.9308E+04	4.1138E+03	-	3.1385E+03	2.1844E+05
2.0090E+02	8.0759E+02	1.4559E+03	-	7.2699E+04	5.1095E+03	-	2.6901E+03	2.7020E+05
2.0090E+02	7.4990E+02	5.4254E+03	-	6.6090E+04	1.7994E+04	-	2.2418E+03	3.4883E+05
2.0090E+02	6.9222E+02	1.7154E+04	-	5.9481E+04	2.0144E+04	-	1.7934E+03	3.8520E+05
2.0090E+02	6.3453E+02	3.7864E+04	-	5.2872E+04	4.8126E+04	-	1.3451E+03	3.8495E+05
2.0090E+02	5.7685E+02	6.7021E+04	-	4.6263E+04	1.2049E+05	-	8.9670E+02	5.1190E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.0090E+02	5.1916E+02	1.2243E+05	-	3.9654E+04	2.4323E+05	-	4.4835E+02	1.5996E+06
2.0090E+02	4.6148E+02	2.5850E+05	-	3.3045E+04	7.6986E+05	-	0.0000E+00	3.4165E+06
2.0090E+02	4.0379E+02	5.3687E+05	-	2.6436E+04	1.4741E+06	-	2.0176E+04	5.5625E-02
2.0090E+02	3.4611E+02	1.2836E+06	-	1.9827E+04	3.0205E+06	-	1.9727E+04	5.5625E-02
2.0090E+02	2.8842E+02	2.6251E+06	-	1.3218E+04	5.2536E+06	-	1.8831E+04	5.5625E-02
2.0090E+02	2.3074E+02	6.0901E+06	-	6.6090E+03	7.6294E+06	-	1.7486E+04	6.2500E-01
2.0090E+02	1.7305E+02	1.1016E+07	-	0.0000E+00	1.0763E+07	-	1.3899E+04	5.5625E-02
2.0090E+02	1.1537E+02	1.5980E+07	-	2.7097E+05	6.5105E+00	-	1.3002E+04	1.7500E+00
2.0090E+02	5.7685E+01	2.2317E+07	-	2.5775E+05	3.3608E+00	-	1.2554E+04	5.5625E-02
2.0090E+02	0.0000E+00	5.3521E+07	-	2.5114E+05	3.9858E+00	-	1.2106E+04	9.2597E-01
1.3379E+02	2.6535E+03	8.2605E+00	-	2.4453E+05	9.5290E+00	-	1.1657E+04	3.0556E+00
1.3379E+02	2.5381E+03	5.2500E+00	-	2.3792E+05	6.5105E+00	-	1.1209E+04	1.7008E+00
1.3379E+02	2.4805E+03	1.7500E+00	-	2.3131E+05	8.2465E+00	-	1.0760E+04	1.9725E+00
1.3379E+02	2.4228E+03	3.4860E+00	-	2.2470E+05	2.2069E+01	-	9.4154E+03	2.0099E+00
1.3379E+02	2.3651E+03	3.5000E+00	-	2.1810E+05	5.5625E-02	-	8.9670E+03	1.1125E-01
1.3379E+02	2.2497E+03	9.5290E+00	-	2.1149E+05	5.5625E-02	-	8.5187E+03	1.2500E+00
1.3379E+02	2.1920E+03	1.7500E+00	-	2.0488E+05	2.0583E+01	-	8.0703E+03	2.8343E+00
1.3379E+02	2.1343E+03	3.5000E+00	-	1.9827E+05	3.7693E+01	-	7.6220E+03	3.0544E+01
1.3379E+02	2.0190E+03	1.3077E+01	-	1.9166E+05	2.2898E+01	-	7.1736E+03	2.3436E+00
1.3379E+02	1.9613E+03	6.2500E-01	-	1.8505E+05	2.7132E+01	-	6.7253E+03	1.0101E+02
1.3379E+02	1.9036E+03	1.1125E-01	-	1.7844E+05	1.2778E+01	-	6.2769E+03	8.4153E+01
1.3379E+02	1.8459E+03	2.9764E+01	-	1.7183E+05	2.5384E+00	-	5.8286E+03	1.1279E+02
1.3379E+02	1.7882E+03	1.3077E+01	-	1.6522E+05	3.0097E-01	-	5.3802E+03	1.5284E+03
1.3379E+02	1.7305E+03	1.1125E-01	-	1.5862E+05	5.1366E+00	-	4.9319E+03	8.7338E+02
1.3379E+02	1.6729E+03	2.6209E+01	-	1.5201E+05	2.6449E+01	-	4.4835E+03	1.0291E+04
1.3379E+02	1.6152E+03	6.5494E+01	-	1.4540E+05	1.5733E+02	-	4.0352E+03	4.5248E+03
1.3379E+02	1.5575E+03	4.2841E+01	-	1.3879E+05	1.7548E+02	-	3.5868E+05	1.5196E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.3379E+02	1.4998E+03	1.0209E+02	-	1.3218E+05	3.7952E+02	-	3.1385E+03	2.3814E+04
1.3379E+02	1.4421E+03	8.0410E+01	-	1.2557E+05	8.3920E+01	-	2.6901E+03	4.0244E+04
1.3379E+02	1.3844E+03	9.2796E+01	-	1.1896E+05	1.0990E+02	-	2.2418E+03	8.1742E+04
1.3379E+02	1.3268E+03	1.5992E+02	-	1.1235E+05	3.5252E+03	-	1.7934E+03	1.0260E+05
1.3379E+02	1.2691E+03	1.8436E+02	-	1.0574E+05	4.4715E+03	-	1.3451E+03	1.4552E+05
1.3379E+02	1.2114E+03	2.8772E+02	-	9.9135E+04	4.3430E+03	-	8.9670E+02	2.3501E+05
1.3379E+02	1.1537E+03	3.3041E+02	-	9.2526E+04	5.4667E+03	-	4.4835E+02	6.3319E+05
1.3379E+02	1.0960E+03	2.3792E+02	-	8.5917E+04	6.8754E+03	-	0.0000E+00	1.7377E+06
1.3379E+02	1.0383E+03	3.4918E+02	-	7.9308E+04	2.2608E+04	-	1.7037E+04	5.5625E-02
1.3379E+02	9.8064E+02	4.0275E+02	-	7.2699E+04	2.8748E+04	-	1.4347E+04	5.5625E-02
1.3379E+02	9.2296E+02	1.4653E+03	-	6.6090E+04	2.7870E+04	-	1.3899E+04	1.1125E-01
1.3379E+02	8.6527E+02	2.8765E+03	-	5.9481E+04	3.3114E+04	-	1.3451E+04	1.1125E-01
1.3379E+02	8.0759E+02	8.8335E+02	-	5.2872E+04	6.1678E+04	-	1.3002E+04	7.3625E-01
1.3379E+02	7.4990E+02	5.2086E+03	-	4.6263E+04	1.2386E+05	-	1.2106E+04	5.5625E-02
1.3379E+02	6.9222E+02	1.6029E+04	-	3.9654E+04	2.6289E+05	-	1.1657E+04	3.4304E+00
1.3379E+02	6.3453E+02	2.1556E+04	-	3.3045E+04	8.0037E+05	-	1.0760E+04	3.5000E+00
1.3379E+02	5.7685E+02	5.4310E+04	-	2.6436E+04	1.6400E+06	-	8.9670E+03	6.0195E-01
1.3379E+02	5.1916E+02	6.8961E+04	-	1.9827E+04	3.7004E+06	-	8.5187E+03	1.0728E+00
1.3379E+02	4.6148E+02	2.1741E+05	-	1.3218E+04	5.8758E+06	-	8.0703E+03	8.2445E-01
1.3379E+02	4.0379E+02	5.1241E+05	-	6.6090E+03	9.0596E+06	-	7.1736E+03	8.7794E+00
1.3379E+02	3.4611E+02	1.2486E+06	-	0.0000E+00	1.2811E+07	-	6.7253E+03	9.7220E+00
1.3379E+02	2.8842E+02	2.6212E+06	-	2.4453E+05	3.4304E+00	-	6.2769E+03	5.1841E+00
1.3379E+02	2.3074E+02	5.6194E+06	-	2.3792E+05	1.6804E+00	-	5.8286E+03	2.3087E+02
1.3379E+02	1.7305E+02	1.1048E+07	-	2.3131E+05	1.6804E+00	-	5.3802E+03	3.7172E+01
1.3379E+02	1.1537E+02	1.4449E+07	-	2.1810E+05	1.6804E+00	-	4.9319E+03	2.1225E+02
1.3379E+02	5.7685E+01	2.0245E+07	-	2.1149E+05	1.3191E+01	-	4.4835E+03	8.5325E+01
1.3379E+02	0.0000E+00	4.9273E+07	-	2.0488E+05	1.4905E+01	-	4.0352E+05	5.7207E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.6684E+01	2.5958E+03	1.7500E+00	-	1.9827E+05	9.7501E+00	-	3.5868E+03	3.8544E+03
6.6684E+01	2.4805E+03	6.5105E+00	-	1.9166E+05	1.6804E+01	-	3.1385E+03	2.0479E+03
6.6684E+01	2.4228E+03	1.6804E+00	-	1.8505E+05	5.8244E+00	-	2.6901E+03	1.3819E+03
6.6684E+01	2.0767E+03	5.5625E-02	-	1.7844E+05	2.0598E+01	-	2.2418E+03	1.6478E+04
6.6684E+01	1.9036E+03	5.5625E-02	-	1.7183E+05	3.2666E+01	-	1.7934E+03	1.0274E+04
6.6684E+01	1.8459E+03	1.1125E-01	-	1.6522E+05	3.1411E+01	-	1.3451E+03	2.3380E+04
6.6684E+01	1.7882E+03	1.3132E+01	-	1.5862E+05	1.5168E+01	-	8.9670E+02	8.1896E+04
6.6684E+01	1.7305E+03	1.3021E+01	-	1.5201E+05	2.6211E+01	-	4.4835E+02	1.8297E+05
6.6684E+01	1.6729E+03	1.1125E-01	-	1.4540E+05	1.3910E+01	-	0.0000E+00	5.9340E+05
6.6684E+01	1.6152E+03	2.2250E-01	-	1.3879E+05	5.8554E+02	-	1.4796E+04	5.5625E-02
6.6684E+01	1.5575E+03	1.4924E+01	-	1.3218E+05	3.7609E+02	-	1.3451E+04	6.2500E-01
6.6684E+01	1.4998E+03	6.2202E+01	-	1.2557E+05	6.3070E+02	-	1.3002E+04	6.2500E-01
6.6684E+01	1.4421E+03	2.6543E+01	-	1.1896E+05	7.1729E+03	-	8.9670E+03	1.1125E-01
6.6684E+01	1.3844E+03	2.7649E+01	-	1.1235E+05	4.6084E+03	-	8.5187E+03	1.8405E-01
6.6684E+01	1.3268E+03	6.5320E+01	-	1.0574E+05	5.0188E+03	-	8.0703E+03	2.2250E-01
6.6684E+01	1.2691E+03	7.6861E+01	-	9.9135E+04	2.5147E+03	-	7.1736E+03	1.1125E-01
6.6684E+01	1.2114E+03	5.3288E+01	-	9.2526E+04	1.0599E+04	-	6.2769E+03	2.4886E+01
6.6684E+01	1.1537E+03	8.3909E+01	-	8.5917E+04	3.4007E+04	-	5.8286E+03	2.2075E+02
6.6684E+01	1.0960E+03	1.1488E+02	-	7.9308E+04	2.9597E+04	-	5.3802E+03	2.3260E+02
6.6684E+01	1.0383E+03	1.0251E+02	-	7.2699E+04	3.6612E+04	-	4.9319E+03	1.4483E+01
6.6684E+01	9.8064E+02	1.6753E+02	-	6.6090E+04	3.4604E+04	-	4.4835E+03	4.4433E+01
6.6684E+01	9.2296E+02	1.4852E+02	-	5.9481E+04	4.5878E+04	-	4.0352E+03	5.9250E+01
6.6684E+01	8.6527E+02	2.1722E+02	-	5.2872E+04	5.6436E+04	-	3.5868E+03	3.0083E+01
6.6684E+01	8.0759E+02	1.3760E+03	-	4.6263E+04	8.9318E+04	-	3.1385E+03	1.7495E+02
6.6684E+01	7.4990E+02	4.3422E+03	-	3.9654E+04	1.7302E+05	-	2.6901E+03	2.8472E+01
6.6684E+01	6.9222E+02	1.4520E+03	-	3.3045E+04	4.2527E+05	-	2.2418E+03	2.7268E+03
6.6684E+01	6.3453E+02	9.8432E+03	-	2.6436E+04	1.4035E+06	-	1.7934E+05	1.0321E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.6684E+01	5.7685E+02	8.0452E+03	-	1.9827E+04	2.7179E+06	-	1.3451E+03	7.5886E+03
6.6684E+01	5.1916E+02	3.7335E+04	-	1.3218E+04	5.1001E+06	-	8.9670E+02	1.1737E+04
6.6684E+01	4.6148E+02	1.0816E+05	-	6.6090E+03	7.7724E+06	-	4.4835E+02	3.8813E+04
6.6684E+01	4.0379E+02	2.1667E+05	-	0.0000E+00	1.3758E+07	-	0.0000E+00	1.2344E+05
6.6684E+01	3.4611E+02	5.7550E+05	-	2.3792E+05	1.6804E+00	-	1.7037E+04	5.5625E-02
6.6684E+01	2.8842E+02	1.2481E+06	-	2.3131E+05	6.5105E+00	-	1.5244E+04	5.5625E-02
6.6684E+01	2.3074E+02	2.1111E+06	-	2.2470E+05	1.0613E+01	-	1.4796E+04	6.2500E-01
6.6684E+01	1.7305E+02	3.3977E+06	-	2.1149E+05	3.3608E+00	-	1.3899E+04	1.1125E-01
6.6684E+01	1.1537E+02	5.3323E+06	-	1.9827E+05	2.2173E+01	-	8.0703E+03	1.1125E-01
6.6684E+01	5.7685E+01	9.3660E+06	-	1.9166E+05	2.5583E+01	-	7.6220E+03	2.0840E+02
6.6684E+01	0.0000E+00	2.9599E+07	-	1.8505E+05	4.5117E+01	-	7.1736E+03	1.8826E+01
-4.2676E-01	2.8266E+03	1.6804E+00	-	1.7844E+05	5.3589E+01	-	6.7253E+03	5.2294E+00
-4.2676E-01	2.6535E+03	1.7500E+00	-	1.7183E+05	3.5831E+00	-	6.2769E+03	9.1940E+00
-4.2676E-01	2.5958E+03	1.7500E+00	-	1.5862E+05	2.5757E+02	-	5.8286E+03	8.1840E+00
-4.2676E-01	2.3651E+03	1.7500E+00	-	1.5201E+05	8.0428E+01	-	5.3802E+03	4.4336E+00
-4.2676E-01	2.1343E+03	1.6804E+00	-	1.4540E+05	6.1283E+01	-	4.9319E+03	3.7225E+00
-4.2676E-01	2.0190E+03	1.6804E+00	-	1.3879E+05	4.4446E+02	-	4.4835E+03	1.7956E+01
-4.2676E-01	1.9036E+03	9.5290E+00	-	1.3218E+05	6.5727E+02	-	4.0352E+03	2.5000E+00
-4.2676E-01	1.8459E+03	1.1125E-01	-	1.2557E+05	7.8598E+02	-	3.5868E+03	4.2961E+00
-4.2676E-01	1.7305E+03	1.9114E+01	-	1.1896E+05	3.5807E+03	-	3.1385E+03	3.4746E+01
-4.2676E-01	1.6729E+03	1.7500E+00	-	1.1235E+05	2.4987E+03	-	2.6901E+03	4.5736E+01
-4.2676E-01	1.6152E+03	7.3625E-01	-	1.0574E+05	1.3858E+04	-	2.2418E+03	4.4923E+01
-4.2676E-01	1.5575E+03	5.5625E-02	-	9.9135E+04	7.5005E+03	-	1.7934E+03	2.5348E+02
-4.2676E-01	1.4998E+03	5.4169E+00	-	9.2526E+04	2.5812E+04	-	1.3451E+03	6.0788E+01
-4.2676E-01	1.4421E+03	1.1125E-01	-	8.5917E+04	2.2092E+04	-	8.9670E+02	7.0076E+01
-4.2676E-01	1.3844E+03	1.8882E+01	-	7.9308E+04	3.3789E+04	-	4.4835E+02	3.5691E+03
-4.2676E-01	1.3268E+03	1.0639E+01	-	7.2699E+04	3.4148E+04	-	0.0000E+00	0.0000E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-4.2676E-01	1.2691E+03	1.5109E+01	-	6.6090E+04	4.7139E+04	-	1.7037E+04	5.5625E-02
-4.2676E-01	1.2114E+03	4.1006E+01	-	5.9481E+04	9.9915E+04	-	1.3899E+04	1.6804E+00
-4.2676E-01	1.1537E+03	4.0128E+01	-	5.2872E+04	9.1304E+04	-	6.2769E+03	9.2341E+00
-4.2676E-01	1.0960E+03	2.7845E+01	-	4.6263E+04	1.7119E+05	-	5.8286E+03	1.2500E+00
-4.2676E-01	1.0383E+03	3.1279E+01	-	3.9654E+04	1.7884E+05	-	5.3802E+03	1.1125E-01
-4.2676E-01	9.8064E+02	3.0093E+01	-	3.3045E+04	4.2480E+05	-	4.9319E+03	3.0309E+01
-4.2676E-01	9.2296E+02	9.2854E+01	-	2.6436E+04	1.1719E+06	-	4.4835E+03	1.1899E+01
-4.2676E-01	8.6527E+02	7.2380E+01	-	1.9827E+04	2.7874E+06	-	4.0352E+03	7.3619E+00
-4.2676E-01	8.0759E+02	6.6460E+03	-	1.3218E+04	4.7436E+06	-	3.5868E+03	1.3161E+01
-4.2676E-01	7.4990E+02	3.2505E+04	-	6.6090E+03	7.5495E+06	-	3.1385E+03	1.7225E+01
-4.2676E-01	6.9222E+02	4.5572E+04	-	0.0000E+00	1.8049E+07	-	2.6901E+03	8.5103E+00
-4.2676E-01	6.3453E+02	7.9983E+04	-	2.1810E+05	1.6804E+00	-	2.2418E+03	4.5824E+01
-4.2676E-01	5.7685E+02	1.6387E+05	-	1.9827E+05	9.7605E+00	-	1.7934E+03	1.9327E+01
-4.2676E-01	5.1916E+02	1.4934E+05	-	1.9166E+05	1.2644E+01	-	1.3451E+03	2.9530E-01
-4.2676E-01	4.6148E+02	1.3069E+05	-	1.8505E+05	2.3415E+01	-	8.9670E+02	6.7135E+00
-4.2676E-01	4.0379E+02	1.6723E+05	-	1.7183E+05	1.2644E+01	-	4.4835E+02	7.0856E+02
-4.2676E-01	3.4611E+02	3.1640E+05	-	1.5862E+05	8.6525E+00	-	0.0000E+00	9.0550E+03
-4.2676E-01	2.8842E+02	4.8441E+05	-	1.5201E+05	3.3287E+01	-	8.0703E+03	3.4720E+00
-4.2676E-01	2.3074E+02	1.0136E+06	-	1.4540E+05	5.7196E+02	-	6.2769E+03	1.8405E-01
-4.2676E-01	1.7305E+02	2.4199E+06	-	1.3879E+05	1.3240E+02	-	5.8286E+03	3.3608E+00
-4.2676E-01	1.1537E+02	5.7628E+06	-	1.3218E+05	3.6378E+03	-	5.3802E+03	1.1125E-01
-4.2676E-01	5.7685E+01	1.4499E+07	-	1.2557E+05	2.2990E+03	-	4.4835E+03	1.8405E-01
-4.2676E-01	0.0000E+00	3.4383E+07	-	1.1896E+05	2.8753E+03	-	4.0352E+03	1.1125E-01
-	2.4228E+03	1.6804E+00	-	1.1235E+05	6.8240E+03	-	3.5868E+03	2.3052E+00
-	2.1920E+03	5.5625E-02	-	1.0574E+05	9.4378E+03	-	3.1385E+03	1.1715E+01
-	2.1343E+03	5.5625E-02	-	9.9135E+04	1.3452E+04	-	2.6901E+03	2.0099E+00
-	2.0190E+03	5.5625E-02	-	9.2526E+04	1.7697E+04	-	2.2418E+03	1.3015E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
6.7537E+01	1.8459E+03	5.5625E-02	7.8940E+04	8.5917E+04	3.6706E+04	7.3140E+03	1.7934E+03	2.3436E+00
-			-			-		
6.7537E+01	1.6729E+03	6.8063E-01	7.8940E+04	7.9308E+04	6.5218E+04	7.3140E+03	1.3451E+03	3.0735E+01
-			-			-		
6.7537E+01	1.6152E+03	6.8063E-01	7.8940E+04	7.2699E+04	8.3828E+04	7.3140E+03	8.9670E+02	3.6135E+01
-			-			-		
6.7537E+01	1.4998E+03	4.3860E+00	7.8940E+04	6.6090E+04	1.2340E+05	7.3140E+03	4.4835E+02	2.5706E+02
-			-			-		
6.7537E+01	1.3844E+03	2.4640E+01	7.8940E+04	5.9481E+04	1.7969E+05	7.3140E+03	0.0000E+00	1.0204E+03
-			-			-		
6.7537E+01	1.3268E+03	1.8070E+01	7.8940E+04	5.2872E+04	2.4264E+05	7.8738E+03	6.7253E+03	1.1125E-01
-			-			-		
6.7537E+01	1.2691E+03	1.7186E+01	7.8940E+04	4.6263E+04	3.9148E+05	7.8738E+03	5.3802E+03	2.3228E+00
-			-			-		
6.7537E+01	1.2114E+03	1.9347E+01	7.8940E+04	3.9654E+04	5.9144E+05	7.8738E+03	3.1385E+03	6.8328E+00
-			-			-		
6.7537E+01	1.1537E+03	5.8750E+00	7.8940E+04	3.3045E+04	8.4639E+05	7.8738E+03	2.6901E+03	6.4435E+00
-			-			-		
6.7537E+01	1.0960E+03	4.1405E+01	7.8940E+04	2.6436E+04	1.5318E+06	7.8738E+03	2.2418E+03	1.8405E-01
-			-			-		
6.7537E+01	1.0383E+03	3.6320E+01	7.8940E+04	1.9827E+04	3.8116E+06	7.8738E+03	1.7934E+03	4.8681E+00
-			-			-		
6.7537E+01	9.8064E+02	4.4525E+01	7.8940E+04	1.3218E+04	5.4754E+06	7.8738E+03	1.3451E+03	2.9530E-01
-			-			-		
6.7537E+01	9.2296E+02	4.7334E+01	7.8940E+04	6.6090E+03	6.2242E+06	7.8738E+03	8.9670E+02	7.3296E+00
-			-			-		
6.7537E+01	8.6527E+02	7.0124E+01	7.8940E+04	0.0000E+00	1.8193E+07	7.8738E+03	4.4835E+02	2.2350E+02
-			-			-		
6.7537E+01	8.0759E+02	9.7997E+01	8.6387E+04	1.8505E+05	1.9361E+01	7.8738E+03	0.0000E+00	3.0126E+02
-			-			-		
6.7537E+01	7.4990E+02	1.6861E+02	8.6387E+04	1.7844E+05	2.5478E+02	8.4335E+03	6.2769E+03	1.1125E-01
-			-			-		
6.7537E+01	6.9222E+02	6.7057E+03	8.6387E+04	1.6522E+05	1.6352E+02	8.4335E+03	5.8286E+03	4.7220E+00
-			-			-		
6.7537E+01	6.3453E+02	3.2505E+02	8.6387E+04	1.5862E+05	9.8517E+02	8.4335E+03	5.3802E+03	1.1125E-01
-			-			-		
6.7537E+01	5.7685E+02	3.4627E+02	8.6387E+04	1.5201E+05	1.8262E+02	8.4335E+03	3.5868E+03	3.5000E+00
-			-			-		
6.7537E+01	5.1916E+02	6.8324E+03	8.6387E+04	1.4540E+05	5.6339E+02	8.4335E+03	3.1385E+03	1.1125E-01
-			-			-		
6.7537E+01	4.6148E+02	2.8376E+03	8.6387E+04	1.3879E+05	2.3934E+03	8.4335E+03	2.2418E+03	1.2500E+00
-			-			-		
6.7537E+01	4.0379E+02	2.6551E+04	8.6387E+04	1.3218E+05	1.4085E+03	8.4335E+03	1.3451E+03	1.1125E-01
-			-			-		
6.7537E+01	3.4611E+02	2.2527E+04	8.6387E+04	1.2557E+05	3.7829E+03	8.4335E+03	4.4835E+02	3.4720E+00
-			-			-		
6.7537E+01	2.8842E+02	1.4495E+04	8.6387E+04	1.1896E+05	7.7194E+03	8.4335E+03	0.0000E+00	6.9650E+01
-			-			-		
6.7537E+01	2.3074E+02	3.8198E+04	8.6387E+04	1.1235E+05	1.1792E+04	8.9932E+03	4.4835E+03	1.2500E+00
-			-			-		
6.7537E+01	1.7305E+02	9.8653E+04	8.6387E+04	1.0574E+05	2.4253E+04	8.9932E+03	2.6901E+03	3.5000E+00
-			-			-		
6.7537E+01	1.1537E+02	3.4038E+05	8.6387E+04	9.9135E+04	3.7219E+04	8.9932E+03	1.7934E+03	1.1125E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
6.7537E+01	5.7685E+01	1.9085E+06	8.6387E+04	9.2526E+04	6.0284E+04	8.9932E+03	4.4835E+02	1.7293E+00
-			-			-		
6.7537E+01	0.0000E+00	6.9588E+06	8.6387E+04	8.5917E+04	1.0674E+05	8.9932E+03	0.0000E+00	1.0148E+01
-			-			-		
1.3465E+02	2.4228E+03	5.5625E-02	8.6387E+04	7.9308E+04	1.3623E+05	9.5529E+03	6.2769E+03	1.1125E-01
-			-			-		
1.3465E+02	1.9613E+03	1.7500E+00	8.6387E+04	7.2699E+04	1.9597E+05	9.5529E+03	8.9670E+02	1.2500E+00
-			-			-		
1.3465E+02	1.6729E+03	5.5625E-02	8.6387E+04	6.6090E+04	3.5358E+05	9.5529E+03	4.4835E+02	3.4720E+00
-			-			-		
1.3465E+02	1.6152E+03	7.0000E+00	8.6387E+04	5.9481E+04	4.5463E+05	9.5529E+03	0.0000E+00	1.6656E+01
-			-			-		
1.3465E+02	1.5575E+03	5.2500E+00	8.6387E+04	5.2872E+04	7.4213E+05	1.0113E+04	0.0000E+00	3.3608E+00
-			-			-		
1.3465E+02	1.4998E+03	5.1804E+00	8.6387E+04	4.6263E+04	9.2325E+05	1.0672E+04	4.4835E+02	1.2500E+00
-			-			-		
1.3465E+02	1.4421E+03	4.7360E+00	8.6387E+04	3.9654E+04	1.3237E+06	1.0672E+04	0.0000E+00	2.0099E+00
-			-					
1.3465E+02	1.3844E+03	7.5970E+00	8.6387E+04	3.3045E+04	1.6247E+06			
-			-					
1.3465E+02	1.3268E+03	1.7500E+01	8.6387E+04	2.6436E+04	2.4506E+06			
-			-					
1.3465E+02	1.2691E+03	1.3791E+01	8.6387E+04	1.9827E+04	3.6991E+06			
-			-					
1.3465E+02	1.2114E+03	4.2362E+00	8.6387E+04	1.3218E+04	4.1983E+06			
-			-					
1.3465E+02	1.1537E+03	2.9558E+01	8.6387E+04	6.6090E+03	5.5291E+06			
-			-					
1.3465E+02	1.0960E+03	5.4041E+01	8.6387E+04	0.0000E+00	1.4680E+07			
-			-					
1.3465E+02	1.0383E+03	7.9488E+01	9.3833E+04	1.8505E+05	7.0000E+02			
-			-					
1.3465E+02	9.8064E+02	3.1222E+01	9.3833E+04	1.7844E+05	1.5373E+01			
-			-					
1.3465E+02	9.2296E+02	3.9374E+01	9.3833E+04	1.7183E+05	3.2479E+02			
-			-					
1.3465E+02	8.6527E+02	4.4082E+01	9.3833E+04	1.5862E+05	2.7520E+03			
-			-					
1.3465E+02	8.0759E+02	6.7580E+01	9.3833E+04	1.5201E+05	3.7497E+02			
-			-					
1.3465E+02	7.4990E+02	1.0766E+02	9.3833E+04	1.4540E+05	2.4565E+03			
-			-					
1.3465E+02	6.9222E+02	8.4441E+01	9.3833E+04	1.3879E+05	6.0160E+03			
-			-					
1.3465E+02	6.3453E+02	7.1917E+01	9.3833E+04	1.3218E+05	5.0620E+03			
-			-					
1.3465E+02	5.7685E+02	1.4312E+02	9.3833E+04	1.2557E+05	5.2256E+03			
-			-					
1.3465E+02	5.1916E+02	1.7379E+02	9.3833E+04	1.1896E+05	8.5803E+03			
-			-					
1.3465E+02	4.6148E+02	1.9111E+02	9.3833E+04	1.1235E+05	1.3199E+04			
-			-					
1.3465E+02	4.0379E+02	2.4238E+03	9.3833E+04	1.0574E+05	3.0355E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
1.3465E+02	3.4611E+02	2.2884E+03	9.3833E+04	9.9135E+04	3.5372E+04			
-			-					
1.3465E+02	2.8842E+02	4.7139E+03	9.3833E+04	9.2526E+04	8.1217E+04			
-			-					
1.3465E+02	2.3074E+02	3.9021E+04	9.3833E+04	8.5917E+04	1.1115E+05			
-			-					
1.3465E+02	1.7305E+02	3.1342E+04	9.3833E+04	7.9308E+04	1.7444E+05			
-			-					
1.3465E+02	1.1537E+02	1.2192E+05	9.3833E+04	7.2699E+04	2.8962E+05			
-			-					
1.3465E+02	5.7685E+01	3.3869E+05	9.3833E+04	6.6090E+04	4.5509E+05			
-			-					
1.3465E+02	0.0000E+00	9.0008E+05	9.3833E+04	5.9481E+04	7.4237E+05			
-			-					
2.0176E+02	2.3074E+03	5.5625E-02	9.3833E+04	5.2872E+04	1.0524E+06			
-			-					
2.0176E+02	1.9036E+03	1.7500E+00	9.3833E+04	4.6263E+04	1.5443E+06			
-			-					
2.0176E+02	1.7305E+03	3.5000E+00	9.3833E+04	3.9654E+04	2.1749E+06			
-			-					
2.0176E+02	1.6152E+03	5.1804E+00	9.3833E+04	3.3045E+04	2.9814E+06			
-			-					
2.0176E+02	1.4998E+03	3.5000E+00	9.3833E+04	2.6436E+04	3.6102E+06			
-			-					
2.0176E+02	1.4421E+03	1.3986E+01	9.3833E+04	1.9827E+04	4.3016E+06			
-			-					
2.0176E+02	1.3844E+03	8.6804E+00	9.3833E+04	1.3218E+04	4.4446E+06			
-			-					
2.0176E+02	1.3268E+03	1.0597E+01	9.3833E+04	6.6090E+03	4.0795E+06			
-			-					
2.0176E+02	1.2691E+03	5.2500E+00	9.3833E+04	0.0000E+00	1.2836E+07			
-			-					
2.0176E+02	1.2114E+03	1.5680E+01	1.0128E+05	1.7183E+05	1.5569E+03			
-			-					
2.0176E+02	1.1537E+03	3.0251E+01	1.0128E+05	1.6522E+05	2.4881E+02			
-			-					
2.0176E+02	1.0960E+03	2.0791E+01	1.0128E+05	1.5862E+05	2.7370E+03			
-			-					
2.0176E+02	1.0383E+03	2.5374E+01	1.0128E+05	1.5201E+05	2.8380E+02			
-			-					
2.0176E+02	9.8064E+02	3.7312E+01	1.0128E+05	1.4540E+05	1.6058E+03			
-			-					
2.0176E+02	9.2296E+02	3.4861E+01	1.0128E+05	1.3879E+05	4.6474E+03			
-			-					
2.0176E+02	8.6527E+02	2.0722E+01	1.0128E+05	1.3218E+05	5.2624E+03			
-			-					
2.0176E+02	8.0759E+02	2.9860E+01	1.0128E+05	1.2557E+05	8.7680E+03			
-			-					
2.0176E+02	7.4990E+02	2.4917E+01	1.0128E+05	1.1896E+05	1.3295E+04			
-			-					
2.0176E+02	6.9222E+02	5.4122E+01	1.0128E+05	1.1235E+05	3.1488E+04			
-			-					
2.0176E+02	6.3453E+02	3.9193E+01	1.0128E+05	1.0574E+05	3.8882E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.0176E+02	5.7685E+02	3.8659E+01	1.0128E+05	9.9135E+04	5.9679E+04			
-			-					
2.0176E+02	5.1916E+02	7.0274E+01	1.0128E+05	9.2526E+04	7.9819E+04			
-			-					
2.0176E+02	4.6148E+02	4.6527E+01	1.0128E+05	8.5917E+04	1.7047E+05			
-			-					
2.0176E+02	4.0379E+02	9.1687E+01	1.0128E+05	7.9308E+04	2.1689E+05			
-			-					
2.0176E+02	3.4611E+02	9.5905E+01	1.0128E+05	7.2699E+04	4.5810E+05			
-			-					
2.0176E+02	2.8842E+02	1.4086E+02	1.0128E+05	6.6090E+04	5.9653E+05			
-			-					
2.0176E+02	2.3074E+02	1.4277E+02	1.0128E+05	5.9481E+04	9.8366E+05			
-			-					
2.0176E+02	1.7305E+02	3.2945E+02	1.0128E+05	5.2872E+04	1.4791E+06			
-			-					
2.0176E+02	1.1537E+02	1.3349E+04	1.0128E+05	4.6263E+04	2.2655E+06			
-			-					
2.0176E+02	5.7685E+01	4.0337E+04	1.0128E+05	3.9654E+04	3.1428E+06			
-			-					
2.0176E+02	0.0000E+00	3.1887E+05	1.0128E+05	3.3045E+04	4.5004E+06			
-			-					
2.6887E+02	2.0190E+03	1.7500E+00	1.0128E+05	2.6436E+04	5.4981E+06			
-			-					
2.6887E+02	1.9613E+03	1.7500E+00	1.0128E+05	1.9827E+04	5.3626E+06			
-			-					
2.6887E+02	1.8459E+03	1.7500E+00	1.0128E+05	1.3218E+04	5.3720E+06			
-			-					
2.6887E+02	1.7882E+03	5.2500E+00	1.0128E+05	6.6090E+03	5.3538E+06			
-			-					
2.6887E+02	1.7305E+03	5.1804E+00	1.0128E+05	0.0000E+00	1.3400E+07			
-			-					
2.6887E+02	1.6152E+03	1.7500E+00	1.0873E+05	1.8505E+05	3.4992E+01			
-			-					
2.6887E+02	1.5575E+03	1.0361E+01	1.0873E+05	1.7844E+05	1.5693E+02			
-			-					
2.6887E+02	1.4998E+03	1.6804E+00	1.0873E+05	1.7183E+05	7.0000E+02			
-			-					
2.6887E+02	1.4421E+03	3.5000E+00	1.0873E+05	1.6522E+05	7.7019E+02			
-			-					
2.6887E+02	1.3844E+03	2.3054E+00	1.0873E+05	1.5862E+05	1.4350E+03			
-			-					
2.6887E+02	1.3268E+03	1.5402E+01	1.0873E+05	1.5201E+05	2.9228E+03			
-			-					
2.6887E+02	1.2691E+03	1.6804E+00	1.0873E+05	1.4540E+05	2.4698E+03			
-			-					
2.6887E+02	1.2114E+03	6.9304E+00	1.0873E+05	1.3879E+05	5.9562E+03			
-			-					
2.6887E+02	1.1537E+03	1.1902E+01	1.0873E+05	1.3218E+05	1.7592E+04			
-			-					
2.6887E+02	1.0960E+03	3.5000E+00	1.0873E+05	1.2557E+05	1.1528E+04			
-			-					
2.6887E+02	1.0383E+03	7.0000E+00	1.0873E+05	1.1896E+05	4.0147E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.6887E+02	9.8064E+02	8.7500E+00	1.0873E+05	1.1235E+05	2.7244E+04			
-			-					
2.6887E+02	8.6527E+02	1.2222E+01	1.0873E+05	1.0574E+05	4.3580E+04			
-			-					
2.6887E+02	8.0759E+02	7.1112E+00	1.0873E+05	9.9135E+04	5.3649E+04			
-			-					
2.6887E+02	7.4990E+02	2.6993E+01	1.0873E+05	9.2526E+04	1.2921E+05			
-			-					
2.6887E+02	6.9222E+02	2.0944E+01	1.0873E+05	8.5917E+04	1.8456E+05			
-			-					
2.6887E+02	6.3453E+02	2.8776E+01	1.0873E+05	7.9308E+04	2.6419E+05			
-			-					
2.6887E+02	5.7685E+02	2.2472E+01	1.0873E+05	7.2699E+04	4.6875E+05			
-			-					
2.6887E+02	5.1916E+02	2.0916E+01	1.0873E+05	6.6090E+04	7.1245E+05			
-			-					
2.6887E+02	4.6148E+02	3.0243E+01	1.0873E+05	5.9481E+04	1.0377E+06			
-			-					
2.6887E+02	4.0379E+02	3.3998E+01	1.0873E+05	5.2872E+04	1.8750E+06			
-			-					
2.6887E+02	3.4611E+02	4.5608E+01	1.0873E+05	4.6263E+04	2.8567E+06			
-			-					
2.6887E+02	2.8842E+02	4.3576E+01	1.0873E+05	3.9654E+04	3.8951E+06			
-			-					
2.6887E+02	2.3074E+02	4.7269E+01	1.0873E+05	3.3045E+04	5.1576E+06			
-			-					
2.6887E+02	1.7305E+02	2.1333E+01	1.0873E+05	2.6436E+04	6.4493E+06			
-			-					
2.6887E+02	1.1537E+02	5.2751E+01	1.0873E+05	1.9827E+04	7.0948E+06			
-			-					
2.6887E+02	5.7685E+01	5.0707E+02	1.0873E+05	1.3218E+04	5.8121E+06			
-			-					
2.6887E+02	0.0000E+00	1.1947E+05	1.0873E+05	6.6090E+03	4.8073E+06			
-			-					
3.3598E+02	1.9036E+03	1.6804E+00	1.0873E+05	0.0000E+00	1.3424E+07			
-			-					
3.3598E+02	1.7305E+03	3.4304E+00	1.1617E+05	1.7183E+05	7.0000E+02			
-			-					
3.3598E+02	1.5575E+03	3.4304E+00	1.1617E+05	1.5862E+05	3.1539E+02			
-			-					
3.3598E+02	1.4998E+03	5.1804E+00	1.1617E+05	1.5201E+05	1.2758E+03			
-			-					
3.3598E+02	1.4421E+03	1.6804E+00	1.1617E+05	1.4540E+05	7.8065E+03			
-			-					
3.3598E+02	1.3844E+03	8.6108E+00	1.1617E+05	1.3879E+05	6.0690E+03			
-			-					
3.3598E+02	1.3268E+03	1.7500E+00	1.1617E+05	1.3218E+05	6.7445E+03			
-			-					
3.3598E+02	1.2691E+03	5.2500E+00	1.1617E+05	1.2557E+05	1.3445E+04			
-			-					
3.3598E+02	1.2114E+03	3.3608E+00	1.1617E+05	1.1896E+05	3.1955E+04			
-			-					
3.3598E+02	1.1537E+03	6.8608E+00	1.1617E+05	1.1235E+05	3.0466E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.3598E+02	1.0960E+03	3.5000E+00	1.1617E+05	1.0574E+05	9.3460E+04			
-			-					
3.3598E+02	1.0383E+03	1.2500E+00	1.1617E+05	9.9135E+04	9.1811E+04			
-			-					
3.3598E+02	9.8064E+02	8.2500E+00	1.1617E+05	9.2526E+04	1.6143E+05			
-			-					
3.3598E+02	9.2296E+02	6.7216E+00	1.1617E+05	8.5917E+04	2.3227E+05			
-			-					
3.3598E+02	8.6527E+02	1.3021E+01	1.1617E+05	7.9308E+04	4.0059E+05			
-			-					
3.3598E+02	8.0759E+02	1.0222E+01	1.1617E+05	7.2699E+04	5.0416E+05			
-			-					
3.3598E+02	7.4990E+02	2.6603E+01	1.1617E+05	6.6090E+04	7.7764E+05			
-			-					
3.3598E+02	6.9222E+02	1.3833E+01	1.1617E+05	5.9481E+04	1.3285E+06			
-			-					
3.3598E+02	6.3453E+02	7.0000E+00	1.1617E+05	5.2872E+04	1.8320E+06			
-			-					
3.3598E+02	5.7685E+02	2.6993E+01	1.1617E+05	4.6263E+04	2.9512E+06			
-			-					
3.3598E+02	5.1916E+02	2.0443E+01	1.1617E+05	3.9654E+04	4.3104E+06			
-			-					
3.3598E+02	4.6148E+02	1.4944E+01	1.1617E+05	3.3045E+04	5.6761E+06			
-			-					
3.3598E+02	4.0379E+02	2.3526E+01	1.1617E+05	2.6436E+04	6.8239E+06			
-			-					
3.3598E+02	3.4611E+02	4.9846E+01	1.1617E+05	1.9827E+04	6.8050E+06			
-			-					
3.3598E+02	2.8842E+02	1.7305E+01	1.1617E+05	1.3218E+04	6.6480E+06			
-			-					
3.3598E+02	2.3074E+02	6.0573E+01	1.1617E+05	6.6090E+03	5.2046E+06			
-			-					
3.3598E+02	1.7305E+02	5.0992E+01	1.1617E+05	0.0000E+00	1.4570E+07			
-			-					
3.3598E+02	1.1537E+02	6.9435E+01	1.2362E+05	1.5862E+05	8.5692E+02			
-			-					
3.3598E+02	5.7685E+01	1.9669E+02	1.2362E+05	1.5201E+05	1.5693E+02			
-			-					
3.3598E+02	0.0000E+00	1.3545E+04	1.2362E+05	1.4540E+05	2.1664E+03			
-			-					
4.0309E+02	2.0190E+03	1.6804E+00	1.2362E+05	1.3879E+05	2.2225E+03			
-			-					
4.0309E+02	1.7305E+03	1.7500E+00	1.2362E+05	1.3218E+05	1.8742E+04			
-			-					
4.0309E+02	1.4421E+03	1.6804E+00	1.2362E+05	1.2557E+05	1.6075E+04			
-			-					
4.0309E+02	1.3268E+03	1.6804E+00	1.2362E+05	1.1896E+05	3.2156E+04			
-			-					
4.0309E+02	1.2114E+03	1.6804E+00	1.2362E+05	1.1235E+05	3.7241E+04			
-			-					
4.0309E+02	1.1537E+03	5.2500E+00	1.2362E+05	1.0574E+05	7.6568E+04			
-			-					
4.0309E+02	1.0960E+03	3.3608E+00	1.2362E+05	9.9135E+04	1.0477E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
4.0309E+02	1.0383E+03	3.5000E+00	1.2362E+05	9.2526E+04	1.4393E+05			
-			-					
4.0309E+02	9.2296E+02	1.0222E+01	1.2362E+05	8.5917E+04	2.5487E+05			
-			-					
4.0309E+02	8.6527E+02	7.0000E+00	1.2362E+05	7.9308E+04	3.5867E+05			
-			-					
4.0309E+02	8.0759E+02	3.5000E+00	1.2362E+05	7.2699E+04	4.7348E+05			
-			-					
4.0309E+02	7.4990E+02	1.0361E+01	1.2362E+05	6.6090E+04	7.9732E+05			
-			-					
4.0309E+02	6.9222E+02	1.3861E+01	1.2362E+05	5.9481E+04	1.3935E+06			
-			-					
4.0309E+02	5.7685E+02	1.7500E+01	1.2362E+05	5.2872E+04	1.9463E+06			
-			-					
4.0309E+02	5.1916E+02	1.6382E+01	1.2362E+05	4.6263E+04	3.1890E+06			
-			-					
4.0309E+02	4.6148E+02	6.8608E+00	1.2362E+05	3.9654E+04	4.2519E+06			
-			-					
4.0309E+02	4.0379E+02	6.8608E+00	1.2362E+05	3.3045E+04	5.9427E+06			
-			-					
4.0309E+02	3.4611E+02	2.3526E+01	1.2362E+05	2.6436E+04	6.7925E+06			
-			-					
4.0309E+02	2.8842E+02	5.0969E+01	1.2362E+05	1.9827E+04	7.1363E+06			
-			-					
4.0309E+02	2.3074E+02	4.7747E+01	1.2362E+05	1.3218E+04	6.2390E+06			
-			-					
4.0309E+02	1.7305E+02	5.9928E+01	1.2362E+05	6.6090E+03	4.9981E+06			
-			-					
4.0309E+02	1.1537E+02	1.4872E+02	1.2362E+05	0.0000E+00	1.5013E+07			
-			-					
4.0309E+02	5.7685E+01	2.1100E+02	1.3106E+05	1.5201E+05	1.4000E+03			
-			-					
4.0309E+02	0.0000E+00	2.3705E+02	1.3106E+05	1.4540E+05	1.4000E+03			
-			-					
4.7020E+02	9.8064E+02	3.5000E+00	1.3106E+05	1.3879E+05	1.7205E+03			
-			-					
4.7020E+02	9.2296E+02	1.3021E+01	1.3106E+05	1.3218E+05	3.8857E+03			
-			-					
4.7020E+02	8.6527E+02	3.3608E+00	1.3106E+05	1.2557E+05	7.8792E+03			
-			-					
4.7020E+02	7.4990E+02	3.5000E+00	1.3106E+05	1.1896E+05	2.3895E+04			
-			-					
4.7020E+02	6.9222E+02	7.0000E+00	1.3106E+05	1.1235E+05	2.9247E+04			
-			-					
4.7020E+02	6.3453E+02	1.0361E+01	1.3106E+05	1.0574E+05	5.7468E+04			
-			-					
4.7020E+02	5.7685E+02	7.1112E+00	1.3106E+05	9.9135E+04	8.9447E+04			
-			-					
4.7020E+02	5.1916E+02	3.3608E+00	1.3106E+05	9.2526E+04	1.5393E+05			
-			-					
4.7020E+02	4.6148E+02	1.0333E+01	1.3106E+05	8.5917E+04	2.6058E+05			
-			-					
4.7020E+02	4.0379E+02	8.1108E+00	1.3106E+05	7.9308E+04	3.7145E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
4.7020E+02	3.4611E+02	1.1472E+01	1.3106E+05	7.2699E+04	6.0080E+05			
-			-					
4.7020E+02	2.8842E+02	1.3582E+01	1.3106E+05	6.6090E+04	1.0105E+06			
-			-					
4.7020E+02	2.3074E+02	1.7082E+01	1.3106E+05	5.9481E+04	1.5233E+06			
-			-					
4.7020E+02	1.7305E+02	4.0719E+01	1.3106E+05	5.2872E+04	2.3348E+06			
-			-					
4.7020E+02	1.1537E+02	2.3748E+01	1.3106E+05	4.6263E+04	3.3511E+06			
-			-					
4.7020E+02	5.7685E+01	7.4663E+01	1.3106E+05	3.9654E+04	5.1803E+06			
-			-					
4.7020E+02	0.0000E+00	8.7631E+01	1.3106E+05	3.3045E+04	6.5392E+06			
-			-					
5.3731E+02	1.0960E+03	3.5000E+00	1.3106E+05	2.6436E+04	7.5238E+06			
-			-					
5.3731E+02	9.2296E+02	1.3021E+01	1.3106E+05	1.9827E+04	7.1773E+06			
-			-					
5.3731E+02	7.4990E+02	3.5000E+00	1.3106E+05	1.3218E+04	6.0768E+06			
-			-					
5.3731E+02	5.7685E+02	3.3608E+00	1.3106E+05	6.6090E+03	5.0903E+06			
-			-					
5.3731E+02	5.1916E+02	1.0082E+01	1.3106E+05	0.0000E+00	1.5001E+07			
-			-					
5.3731E+02	4.6148E+02	6.8608E+00	1.3851E+05	1.2557E+05	1.2347E+02			
-			-					
5.3731E+02	4.0379E+02	1.3582E+01	1.3851E+05	1.1896E+05	1.2347E+02			
-			-					
5.3731E+02	3.4611E+02	2.0165E+01	1.3851E+05	1.1235E+05	1.3868E+04			
-			-					
5.3731E+02	2.8842E+02	1.0082E+01	1.3851E+05	1.0574E+05	1.6353E+04			
-			-					
5.3731E+02	2.3074E+02	1.0082E+01	1.3851E+05	9.9135E+04	3.8831E+04			
-			-					
5.3731E+02	1.7305E+02	1.6804E+01	1.3851E+05	9.2526E+04	6.5131E+04			
-			-					
5.3731E+02	1.1537E+02	6.9828E+01	1.3851E+05	8.5917E+04	1.0409E+05			
-			-					
5.3731E+02	5.7685E+01	8.3468E+01	1.3851E+05	7.9308E+04	2.0512E+05			
-			-					
5.3731E+02	0.0000E+00	7.2332E+01	1.3851E+05	7.2699E+04	3.4171E+05			
-			-					
6.0442E+02	7.4990E+02	3.3608E+00	1.3851E+05	6.6090E+04	6.2412E+05			
-			-					
6.0442E+02	4.0379E+02	3.5000E+00	1.3851E+05	5.9481E+04	1.1520E+06			
-			-					
6.0442E+02	2.8842E+02	1.6804E+01	1.3851E+05	5.2872E+04	1.8658E+06			
-			-					
6.0442E+02	2.3074E+02	1.3443E+01	1.3851E+05	4.6263E+04	2.8336E+06			
-			-					
6.0442E+02	1.7305E+02	3.3608E+00	1.3851E+05	3.9654E+04	3.9891E+06			
-			-					
6.0442E+02	1.1537E+02	2.7304E+01	1.3851E+05	3.3045E+04	5.5911E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
6.0442E+02	5.7685E+01	5.8235E+01	1.3851E+05	2.6436E+04	6.9290E+06			
-			-					
6.0442E+02	0.0000E+00	4.9526E+01	1.3851E+05	1.9827E+04	7.1583E+06			
-			-					
6.7153E+02	4.0379E+02	3.3608E+00	1.3851E+05	1.3218E+04	5.7112E+06			
-			-					
6.7153E+02	2.3074E+02	1.6804E+01	1.3851E+05	6.6090E+03	5.1741E+06			
-			-					
6.7153E+02	1.7305E+02	1.6915E+01	1.3851E+05	0.0000E+00	1.4071E+07			
-			-					
6.7153E+02	1.1537E+02	1.6943E+01	1.4596E+05	1.1235E+05	2.4863E+02			
-			-					
6.7153E+02	5.7685E+01	3.0187E+01	1.4596E+05	1.0574E+05	2.0484E+03			
-			-					
6.7153E+02	0.0000E+00	5.1437E+01	1.4596E+05	9.9135E+04	7.1813E+03			
-			-					
7.3864E+02	6.3453E+02	3.3608E+00	1.4596E+05	9.2526E+04	3.6614E+03			
-			-					
7.3864E+02	5.7685E+02	3.3608E+00	1.4596E+05	8.5917E+04	1.4406E+04			
-			-					
7.3864E+02	4.6148E+02	3.3608E+00	1.4596E+05	7.9308E+04	3.1143E+04			
-			-					
7.3864E+02	4.0379E+02	3.3608E+00	1.4596E+05	7.2699E+04	6.9225E+04			
-			-					
7.3864E+02	2.3074E+02	1.0082E+01	1.4596E+05	6.6090E+04	1.6150E+05			
-			-					
7.3864E+02	1.7305E+02	3.3608E+00	1.4596E+05	5.9481E+04	3.6448E+05			
-			-					
7.3864E+02	1.1537E+02	1.3443E+01	1.4596E+05	5.2872E+04	8.3028E+05			
-			-					
7.3864E+02	5.7685E+01	1.6804E+01	1.4596E+05	4.6263E+04	1.1642E+06			
-			-					
7.3864E+02	0.0000E+00	1.7222E+01	1.4596E+05	3.9654E+04	2.2368E+06			
-			-					
8.0575E+02	3.4611E+02	3.3608E+00	1.4596E+05	3.3045E+04	2.8923E+06			
-			-					
8.0575E+02	2.8842E+02	3.3608E+00	1.4596E+05	2.6436E+04	3.8014E+06			
-			-					
8.0575E+02	1.7305E+02	6.8608E+00	1.4596E+05	1.9827E+04	4.5776E+06			
-			-					
8.0575E+02	5.7685E+01	1.3443E+01	1.4596E+05	1.3218E+04	4.1559E+06			
-			-					
8.0575E+02	0.0000E+00	1.8165E+01	1.4596E+05	6.6090E+03	3.3612E+06			
-			-					
8.7286E+02	6.3453E+02	3.3608E+00	1.4596E+05	0.0000E+00	9.9592E+06			
-			-					
8.7286E+02	2.8842E+02	3.3608E+00	1.5340E+05	8.5917E+04	3.4672E+03			
-			-					
8.7286E+02	2.3074E+02	6.7216E+00	1.5340E+05	7.9308E+04	7.4085E+02			
-			-					
8.7286E+02	1.7305E+02	3.3608E+00	1.5340E+05	7.2699E+04	2.4695E+02			
-			-					
8.7286E+02	1.1537E+02	3.3608E+00	1.5340E+05	6.6090E+04	3.7914E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
8.7286E+02	0.0000E+00	6.8608E+00	1.5340E+05	5.9481E+04	1.2725E+05			
-			-					
9.3997E+02	3.4611E+02	3.3608E+00	1.5340E+05	5.2872E+04	9.8877E+04			
-			-					
9.3997E+02	2.8842E+02	3.3608E+00	1.5340E+05	4.6263E+04	4.5527E+05			
-			-					
9.3997E+02	2.3074E+02	3.3608E+00	1.5340E+05	3.9654E+04	6.8514E+05			
-			-					
9.3997E+02	5.7685E+01	3.3608E+00	1.5340E+05	3.3045E+04	1.1966E+06			
-			-					
9.3997E+02	0.0000E+00	1.0082E+01	1.5340E+05	2.6436E+04	1.5838E+06			
-			-					
1.0071E+03	1.1537E+02	3.3608E+00	1.5340E+05	1.9827E+04	1.9961E+06			
-			-					
1.0071E+03	0.0000E+00	3.3608E+00	1.5340E+05	1.3218E+04	1.6051E+06			
-			-					
1.0742E+03	1.1537E+02	3.3608E+00	1.5340E+05	6.6090E+03	1.7464E+06			
			-					
			1.5340E+05	0.0000E+00	4.9472E+06			
			-					
			1.6085E+05	7.2699E+04	6.9983E+01			
			-					
			1.6085E+05	5.2872E+04	2.3246E+04			
			-					
			1.6085E+05	4.6263E+04	2.3779E+04			
			-					
			1.6085E+05	3.9654E+04	4.4895E+04			
			-					
			1.6085E+05	3.3045E+04	1.1120E+05			
			-					
			1.6085E+05	2.6436E+04	2.9357E+05			
			-					
			1.6085E+05	1.9827E+04	2.1509E+05			
			-					
			1.6085E+05	1.3218E+04	2.4391E+05			
			-					
			1.6085E+05	6.6090E+03	2.9406E+05			
			-					
			1.6085E+05	0.0000E+00	1.3908E+06			
			-					
			1.6830E+05	5.9481E+04	6.7216E+00			
			-					
			1.6830E+05	3.9654E+04	2.5031E+02			
			-					
			1.6830E+05	3.3045E+04	7.0798E+03			
			-					
			1.6830E+05	2.6436E+04	1.3876E+04			
			-					
			1.6830E+05	1.9827E+04	1.0082E+01			
			-					
			1.6830E+05	1.3218E+04	1.3882E+04			
			-					
			1.6830E+05	6.6090E+03	1.2580E+04			



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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			- 1.6830E+05	0.0000E+00	2.8826E+05			
			- 1.7574E+05	1.3218E+04	3.3608E+00			
			- 1.7574E+05	0.0000E+00	1.7159E+04			
			- 1.8319E+05	0.0000E+00	6.7216E+00			
			- 1.9064E+05	0.0000E+00	3.3608E+00			

Table 5-13 [3] Markov Matrix

Appendix F. Markov matrices – issued from [4]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [4]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.5918E+03	0.0000E+00	2.8000E+03	1.5459E+05	6.7456E+03	6.7216E+00	8.8035E+03	0.0000E+00	3.3608E+00
1.5215E+03	0.0000E+00	1.5329E+03	1.5459E+05	0.0000E+00	3.3608E+00	7.7006E+03	0.0000E+00	3.5000E+00
1.4513E+03	5.8436E+01	2.4695E+02	1.4705E+05	6.7456E+03	3.3608E+00	7.1491E+03	0.0000E+00	1.0222E+01
1.4513E+03	0.0000E+00	1.0549E+04	1.4705E+05	0.0000E+00	6.7216E+00	6.5976E+03	2.2057E+03	3.5000E+00
1.3810E+03	5.8436E+01	3.1302E+03	1.3951E+05	2.6983E+04	3.3608E+00	6.5976E+03	1.7645E+03	3.3608E+00
1.3810E+03	0.0000E+00	4.9525E+04	1.3951E+05	1.3491E+04	3.3608E+00	6.5976E+03	4.4113E+02	7.0000E+00
1.3108E+03	1.1687E+02	2.4863E+02	1.3951E+05	0.0000E+00	6.7216E+00	6.5976E+03	0.0000E+00	2.2816E+03
1.3108E+03	5.8436E+01	4.0466E+04	1.3198E+05	0.0000E+00	1.0082E+01	6.0461E+03	5.2936E+03	3.3608E+00
1.3108E+03	0.0000E+00	1.2526E+05	1.2444E+05	2.0237E+04	3.3608E+00	6.0461E+03	2.6468E+03	3.5000E+00
1.2405E+03	3.5062E+02	1.2347E+02	1.2444E+05	0.0000E+00	1.6804E+01	6.0461E+03	2.2057E+03	1.1125E-01
1.2405E+03	2.3375E+02	1.7500E+00	1.1691E+05	1.3491E+04	3.3608E+00	6.0461E+03	1.3234E+03	3.5000E+00
1.2405E+03	1.1687E+02	4.9344E+03	1.1691E+05	6.7456E+03	3.3608E+00	6.0461E+03	8.8227E+02	3.6112E+00
1.2405E+03	5.8436E+01	7.0839E+04	1.1691E+05	0.0000E+00	1.0082E+01	6.0461E+03	4.4113E+02	3.3663E+02
1.2405E+03	0.0000E+00	3.5360E+05	1.0937E+05	2.6983E+04	3.3608E+00	6.0461E+03	0.0000E+00	4.0947E+02
1.1703E+03	3.5062E+02	6.5105E+00	1.0937E+05	0.0000E+00	2.6886E+01	5.4946E+03	7.0582E+03	3.3608E+00
1.1703E+03	2.9218E+02	1.6804E+00	1.0183E+05	1.3491E+04	3.5000E+00	5.4946E+03	5.2936E+03	3.5000E+00
1.1703E+03	2.3375E+02	6.2500E-01	1.0183E+05	6.7456E+03	3.3608E+00	5.4946E+03	4.4113E+03	3.3608E+00
1.1703E+03	1.1687E+02	1.5193E+04	1.0183E+05	0.0000E+00	2.3526E+01	5.4946E+03	3.9702E+03	3.3608E+00
1.1703E+03	5.8436E+01	2.4941E+05	9.4296E+04	4.7219E+04	3.5000E+00	5.4946E+03	3.5291E+03	3.5000E+00
1.1703E+03	0.0000E+00	1.0638E+06	9.4296E+04	1.3491E+04	6.7216E+00	5.4946E+03	3.0879E+03	1.9307E+01
1.1000E+03	5.2593E+02	6.5105E+00	9.4296E+04	6.7456E+03	1.0082E+01	5.4946E+03	2.6468E+03	3.5000E+00
1.1000E+03	4.0905E+02	1.2446E+01	9.4296E+04	0.0000E+00	3.1636E+01	5.4946E+03	1.3234E+03	3.3608E+00
1.1000E+03	2.3375E+02	1.3642E+03	8.6760E+04	3.3728E+04	1.3021E+01	5.4946E+03	4.4113E+02	7.6433E+03
1.1000E+03	1.7531E+02	9.6742E+02	8.6760E+04	2.6983E+04	1.0500E+01	5.4946E+03	0.0000E+00	2.4875E+04
1.1000E+03	1.1687E+02	5.9083E+04	8.6760E+04	2.0237E+04	6.7216E+00	4.9431E+03	5.7347E+03	3.5000E+00
1.1000E+03	5.8436E+01	7.8279E+05	8.6760E+04	1.3491E+04	7.9716E+00	4.9431E+03	5.2936E+03	1.1125E-01
1.1000E+03	0.0000E+00	3.0324E+06	8.6760E+04	6.7456E+03	2.6886E+01	4.9431E+03	3.9702E+03	6.7216E+00
1.0297E+03	8.1811E+02	2.4695E+02	8.6760E+04	0.0000E+00	6.9301E+01	4.9431E+03	3.5291E+03	3.5000E+00
1.0297E+03	7.5967E+02	1.7500E+00	7.9224E+04	6.7456E+04	7.0000E+00	4.9431E+03	3.0879E+03	7.9336E+00
1.0297E+03	6.4280E+02	1.8622E+03	7.9224E+04	4.0474E+04	3.5000E+00	4.9431E+03	2.2057E+03	4.9762E+02
1.0297E+03	5.8436E+02	1.4038E+02	7.9224E+04	2.6983E+04	7.0000E+00	4.9431E+03	1.7645E+03	7.0000E+00
1.0297E+03	5.2593E+02	1.4988E+03	7.9224E+04	2.0237E+04	1.7222E+01	4.9431E+03	1.3234E+03	2.5734E+01
1.0297E+03	4.6749E+02	6.9505E+03	7.9224E+04	1.3491E+04	1.6943E+01	4.9431E+03	8.8227E+02	1.2887E+04
1.0297E+03	4.0905E+02	1.1832E+01	7.9224E+04	6.7456E+03	2.3776E+01	4.9431E+03	4.4113E+02	5.425E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0297E+03	3.5062E+02	8.2578E+02	7.9224E+04	0.0000E+00	7.6301E+01	4.9431E+03	0.0000E+00	1.6581E+05
1.0297E+03	2.9218E+02	6.9462E+03	7.1687E+04	2.0237E+05	1.6804E+00	4.3917E+03	1.6322E+04	1.6804E+00
1.0297E+03	2.3375E+02	2.2990E+03	7.1687E+04	1.8213E+05	1.6804E+00	4.3917E+03	1.2793E+04	1.7500E+00
1.0297E+03	1.7531E+02	4.0008E+04	7.1687E+04	1.6864E+05	1.6804E+00	4.3917E+03	7.4993E+03	3.3608E+00
1.0297E+03	1.1687E+02	3.3664E+05	7.1687E+04	7.4202E+04	3.3608E+00	4.3917E+03	7.0582E+03	6.8608E+00
1.0297E+03	5.8436E+01	2.2721E+06	7.1687E+04	6.7456E+04	3.5000E+00	4.3917E+03	5.2936E+03	6.8608E+00
1.0297E+03	0.0000E+00	6.8502E+06	7.1687E+04	6.0711E+04	7.0000E+00	4.3917E+03	4.8525E+03	6.7216E+00
9.5949E+02	1.6362E+03	7.0000E+02	7.1687E+04	4.0474E+04	3.5000E+00	4.3917E+03	4.4113E+03	3.3608E+00
9.5949E+02	1.2856E+03	3.4672E+03	7.1687E+04	3.3728E+04	1.0082E+01	4.3917E+03	3.5291E+03	1.5076E+01
9.5949E+02	1.2272E+03	6.5105E+00	7.1687E+04	2.6983E+04	6.9720E+00	4.3917E+03	3.0879E+03	4.4395E+03
9.5949E+02	1.1687E+03	7.0895E+03	7.1687E+04	2.0237E+04	2.0132E+01	4.3917E+03	2.6468E+03	5.4464E+03
9.5949E+02	1.1103E+03	6.9983E+01	7.1687E+04	1.3491E+04	2.5193E+01	4.3917E+03	2.2057E+03	1.3810E+03
9.5949E+02	1.0519E+03	6.9378E+03	7.1687E+04	6.7456E+03	4.0158E+01	4.3917E+03	1.7645E+03	2.2889E+04
9.5949E+02	9.9342E+02	7.7121E+03	7.1687E+04	0.0000E+00	5.4269E+01	4.3917E+03	1.3234E+03	1.3454E+04
9.5949E+02	9.3498E+02	2.1395E+04	6.4151E+04	1.9562E+05	1.6804E+00	4.3917E+03	8.8227E+02	1.1968E+05
9.5949E+02	8.7655E+02	7.9116E+03	6.4151E+04	1.8888E+05	1.6804E+00	4.3917E+03	4.4113E+02	1.5165E+05
9.5949E+02	8.1811E+02	2.8794E+04	6.4151E+04	8.0948E+04	6.8608E+00	4.3917E+03	0.0000E+00	6.8554E+05
9.5949E+02	7.5967E+02	6.9880E+04	6.4151E+04	6.7456E+04	3.5000E+00	3.8402E+03	1.3675E+04	3.4304E+00
9.5949E+02	7.0124E+02	7.4120E+04	6.4151E+04	5.3965E+04	3.5000E+00	3.8402E+03	7.0582E+03	6.7216E+00
9.5949E+02	6.4280E+02	9.4258E+04	6.4151E+04	4.7219E+04	2.0021E+01	3.8402E+03	6.1759E+03	3.1385E+02
9.5949E+02	5.8436E+02	1.7364E+05	6.4151E+04	4.0474E+04	3.5000E+00	3.8402E+03	5.7347E+03	4.1120E+00
9.5949E+02	5.2593E+02	2.4604E+05	6.4151E+04	3.3728E+04	3.6112E+00	3.8402E+03	5.2936E+03	5.3707E+00
9.5949E+02	4.6749E+02	2.7951E+05	6.4151E+04	2.6983E+04	2.3382E+01	3.8402E+03	4.8525E+03	8.7006E+02
9.5949E+02	4.0905E+02	3.2346E+05	6.4151E+04	2.0237E+04	1.0361E+01	3.8402E+03	4.4113E+03	2.6640E+01
9.5949E+02	3.5062E+02	3.9110E+05	6.4151E+04	1.3491E+04	2.3943E+01	3.8402E+03	3.9702E+03	1.2540E+04
9.5949E+02	2.9218E+02	3.0952E+05	6.4151E+04	6.7456E+03	5.7908E+01	3.8402E+03	3.5291E+03	2.2635E+04
9.5949E+02	2.3375E+02	3.0020E+05	6.4151E+04	0.0000E+00	1.3856E+02	3.8402E+03	3.0879E+03	5.6057E+04
9.5949E+02	1.7531E+02	3.3949E+05	5.6615E+04	1.8888E+05	1.6804E+00	3.8402E+03	2.6468E+03	1.1019E+05
9.5949E+02	1.1687E+02	1.1444E+06	5.6615E+04	1.6864E+05	1.6804E+00	3.8402E+03	2.2057E+03	1.6909E+05
9.5949E+02	5.8436E+01	5.8984E+06	5.6615E+04	1.6190E+05	3.4304E+00	3.8402E+03	1.7645E+03	1.2314E+05
9.5949E+02	0.0000E+00	1.3575E+07	5.6615E+04	1.4840E+05	1.6804E+00	3.8402E+03	1.3234E+03	1.6307E+05
8.8923E+02	1.9868E+03	1.5693E+02	5.6615E+04	1.4166E+05	3.3608E+00	3.8402E+03	8.8227E+02	2.1697E+05
8.8923E+02	1.9284E+03	7.0190E+01	5.6615E+04	1.1468E+05	3.5000E+00	3.8402E+03	4.4113E+02	8.2529E+05
8.8923E+02	1.7531E+03	1.6804E+00	5.6615E+04	1.0118E+05	3.5000E+00	3.8402E+03	0.0000E+00	1.7889E+06
8.8923E+02	1.6947E+03	1.8039E+03	5.6615E+04	8.7693E+04	3.3608E+00	3.2887E+03	1.8087E+04	5.5625E-02
8.8923E+02	1.6362E+03	3.1385E+02	5.6615E+04	8.0948E+04	3.3608E+00	3.2887E+03	1.4116E+04	1.6804E+00
8.8923E+02	1.5778E+03	1.5252E+03	5.6615E+04	6.7456E+04	3.5000E+00	3.2887E+03	1.2352E+04	1.6804E+00
8.8923E+02	1.5193E+03	4.4830E+03	5.6615E+04	6.0711E+04	3.3608E+00	3.2887E+03	1.1028E+04	1.6804E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.8923E+02	1.4609E+03	2.1637E+03	5.6615E+04	5.3965E+04	8.1108E+00	3.2887E+03	7.9404E+03	1.1125E-01
8.8923E+02	1.4025E+03	1.3722E+04	5.6615E+04	4.7219E+04	1.5111E+01	3.2887E+03	7.4993E+03	3.5000E+00
8.8923E+02	1.3440E+03	2.1799E+04	5.6615E+04	4.0474E+04	2.0132E+01	3.2887E+03	7.0582E+03	5.9715E+00
8.8923E+02	1.2856E+03	1.5685E+04	5.6615E+04	3.3728E+04	6.9720E+00	3.2887E+03	6.6170E+03	1.3042E+02
8.8923E+02	1.2272E+03	3.6907E+04	5.6615E+04	2.6983E+04	3.3993E+01	3.2887E+03	6.1759E+03	4.2044E+03
8.8923E+02	1.1687E+03	5.1177E+04	5.6615E+04	2.0237E+04	8.2220E+00	3.2887E+03	5.7347E+03	1.2899E+03
8.8923E+02	1.1103E+03	8.2419E+04	5.6615E+04	1.3491E+04	5.0124E+01	3.2887E+03	5.2936E+03	1.0319E+04
8.8923E+02	1.0519E+03	1.3862E+05	5.6615E+04	6.7456E+03	4.1220E+01	3.2887E+03	4.8525E+03	4.1698E+04
8.8923E+02	9.9342E+02	1.1139E+05	5.6615E+04	0.0000E+00	1.0247E+02	3.2887E+03	4.4113E+03	4.9305E+04
8.8923E+02	9.3498E+02	2.3502E+05	4.9079E+04	1.8213E+05	1.6804E+00	3.2887E+03	3.9702E+03	1.1560E+05
8.8923E+02	8.7655E+02	4.1127E+05	4.9079E+04	1.7539E+05	1.7500E+00	3.2887E+03	3.5291E+03	2.7026E+05
8.8923E+02	8.1811E+02	5.0013E+05	4.9079E+04	1.6864E+05	1.6804E+00	3.2887E+03	3.0879E+03	2.9073E+05
8.8923E+02	7.5967E+02	8.4730E+05	4.9079E+04	1.6190E+05	1.6804E+00	3.2887E+03	2.6468E+03	3.2851E+05
8.8923E+02	7.0124E+02	9.4161E+05	4.9079E+04	1.5515E+05	1.6804E+00	3.2887E+03	2.2057E+03	4.1518E+05
8.8923E+02	6.4280E+02	1.2118E+06	4.9079E+04	1.4840E+05	3.4304E+00	3.2887E+03	1.7645E+03	4.1404E+05
8.8923E+02	5.8436E+02	1.9200E+06	4.9079E+04	1.4166E+05	3.4304E+00	3.2887E+03	1.3234E+03	3.9773E+05
8.8923E+02	5.2593E+02	2.1417E+06	4.9079E+04	1.3491E+05	1.0291E+01	3.2887E+03	8.8227E+02	6.4628E+05
8.8923E+02	4.6749E+02	2.4923E+06	4.9079E+04	1.2817E+05	1.6804E+00	3.2887E+03	4.4113E+02	1.9087E+06
8.8923E+02	4.0905E+02	2.7625E+06	4.9079E+04	1.2142E+05	5.1804E+00	3.2887E+03	0.0000E+00	3.9379E+06
8.8923E+02	3.5062E+02	2.6237E+06	4.9079E+04	8.7693E+04	6.8608E+00	2.7372E+03	1.9410E+04	1.7360E+00
8.8923E+02	2.9218E+02	2.7711E+06	4.9079E+04	8.0948E+04	6.7216E+00	2.7372E+03	1.5881E+04	1.6804E+00
8.8923E+02	2.3375E+02	2.2528E+06	4.9079E+04	6.0711E+04	3.3608E+00	2.7372E+03	1.2352E+04	3.5000E+00
8.8923E+02	1.7531E+02	2.2876E+06	4.9079E+04	5.3965E+04	1.0222E+01	2.7372E+03	1.1911E+04	1.7500E+00
8.8923E+02	1.1687E+02	3.5957E+06	4.9079E+04	4.7219E+04	1.0500E+01	2.7372E+03	1.0587E+04	1.6804E+00
8.8923E+02	5.8436E+01	1.2922E+07	4.9079E+04	4.0474E+04	3.3993E+01	2.7372E+03	1.0146E+04	1.7500E+00
8.8923E+02	0.0000E+00	2.1232E+07	4.9079E+04	3.3728E+04	1.0222E+01	2.7372E+03	9.7050E+03	1.6804E+00
8.1897E+02	2.1037E+03	7.7019E+02	4.9079E+04	2.6983E+04	1.3972E+01	2.7372E+03	7.4993E+03	4.8679E+03
8.1897E+02	2.0453E+03	3.1136E+03	4.9079E+04	2.0237E+04	3.8970E+01	2.7372E+03	7.0582E+03	1.4740E+03
8.1897E+02	1.9868E+03	7.0175E+02	4.9079E+04	1.3491E+04	2.4305E+01	2.7372E+03	6.6170E+03	2.1080E+04
8.1897E+02	1.9284E+03	1.2627E+03	4.9079E+04	6.7456E+03	5.7358E+01	2.7372E+03	6.1759E+03	3.1666E+04
8.1897E+02	1.8700E+03	4.0052E+03	4.9079E+04	0.0000E+00	1.2949E+02	2.7372E+03	5.7347E+03	7.3464E+04
8.1897E+02	1.8115E+03	5.8500E+03	4.1542E+04	1.8213E+05	1.6804E+00	2.7372E+03	5.2936E+03	1.0375E+05
8.1897E+02	1.7531E+03	5.7301E+03	4.1542E+04	1.6190E+05	5.1804E+00	2.7372E+03	4.8525E+03	1.4628E+05
8.1897E+02	1.6947E+03	1.6622E+04	4.1542E+04	1.4840E+05	7.0000E+00	2.7372E+03	4.4113E+03	2.9815E+05
8.1897E+02	1.6362E+03	6.9435E+03	4.1542E+04	1.4166E+05	5.1108E+00	2.7372E+03	3.9702E+03	4.8098E+05
8.1897E+02	1.5778E+03	3.8529E+04	4.1542E+04	1.3491E+05	3.5000E+00	2.7372E+03	3.5291E+03	5.6758E+05
8.1897E+02	1.5193E+03	4.3349E+04	4.1542E+04	1.2817E+05	3.5000E+00	2.7372E+03	3.0879E+03	7.2723E+05
8.1897E+02	1.4609E+03	4.4781E+04	4.1542E+04	1.2142E+05	5.2500E+00	2.7372E+03	2.6468E+03	7.0146E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.1897E+02	1.4025E+03	9.7310E+04	4.1542E+04	1.1468E+05	1.0430E+01	2.7372E+03	2.2057E+03	8.8656E+05
8.1897E+02	1.3440E+03	1.1583E+05	4.1542E+04	1.0118E+05	3.3608E+00	2.7372E+03	1.7645E+03	8.2595E+05
8.1897E+02	1.2856E+03	2.1200E+05	4.1542E+04	9.4439E+04	3.5000E+00	2.7372E+03	1.3234E+03	7.7467E+05
8.1897E+02	1.2272E+03	2.3799E+05	4.1542E+04	8.7693E+04	1.0361E+01	2.7372E+03	8.8227E+02	1.4286E+06
8.1897E+02	1.1687E+03	3.9961E+05	4.1542E+04	8.0948E+04	3.5000E+00	2.7372E+03	4.4113E+02	3.6936E+06
8.1897E+02	1.1103E+03	5.5336E+05	4.1542E+04	7.4202E+04	3.5000E+00	2.7372E+03	0.0000E+00	7.2490E+06
8.1897E+02	1.0519E+03	7.7242E+05	4.1542E+04	6.7456E+04	7.0000E+00	2.1857E+03	1.7204E+04	1.6804E+00
8.1897E+02	9.9342E+02	9.4710E+05	4.1542E+04	6.0711E+04	6.7216E+00	2.1857E+03	1.4999E+04	5.5625E-02
8.1897E+02	9.3498E+02	1.2342E+06	4.1542E+04	5.3965E+04	2.1000E+01	2.1857E+03	1.4557E+04	6.2500E-01
8.1897E+02	8.7655E+02	1.6253E+06	4.1542E+04	4.7219E+04	3.1472E+01	2.1857E+03	1.2352E+04	1.7500E+00
8.1897E+02	8.1811E+02	2.2054E+06	4.1542E+04	4.0474E+04	2.7833E+01	2.1857E+03	1.1911E+04	5.0412E+00
8.1897E+02	7.5967E+02	2.6602E+06	4.1542E+04	3.3728E+04	3.7215E+01	2.1857E+03	1.1469E+04	1.6804E+00
8.1897E+02	7.0124E+02	3.3781E+06	4.1542E+04	2.6983E+04	3.9583E+01	2.1857E+03	1.1028E+04	5.5625E-02
8.1897E+02	6.4280E+02	3.8151E+06	4.1542E+04	2.0237E+04	9.5754E+01	2.1857E+03	1.0146E+04	3.6112E+00
8.1897E+02	5.8436E+02	5.1993E+06	4.1542E+04	1.3491E+04	2.7415E+01	2.1857E+03	9.7050E+03	7.3113E+01
8.1897E+02	5.2593E+02	5.5429E+06	4.1542E+04	6.7456E+03	1.8082E+02	2.1857E+03	9.2638E+03	5.6845E+03
8.1897E+02	4.6749E+02	6.0626E+06	4.1542E+04	0.0000E+00	3.5726E+02	2.1857E+03	8.8227E+03	1.4771E+01
8.1897E+02	4.0905E+02	6.3833E+06	3.4006E+04	1.6864E+05	3.4304E+00	2.1857E+03	8.3816E+03	1.4225E+03
8.1897E+02	3.5062E+02	6.2084E+06	3.4006E+04	1.6190E+05	3.5556E+00	2.1857E+03	7.9404E+03	3.9153E+03
8.1897E+02	2.9218E+02	5.9950E+06	3.4006E+04	1.5515E+05	5.1804E+00	2.1857E+03	7.4993E+03	1.7584E+04
8.1897E+02	2.3375E+02	5.1359E+06	3.4006E+04	1.4840E+05	1.7500E+00	2.1857E+03	7.0582E+03	3.7581E+04
8.1897E+02	1.7531E+02	3.8250E+06	3.4006E+04	1.4166E+05	5.1804E+00	2.1857E+03	6.6170E+03	8.3183E+04
8.1897E+02	1.1687E+02	6.7525E+06	3.4006E+04	1.3491E+05	4.1250E+00	2.1857E+03	6.1759E+03	1.3852E+05
8.1897E+02	5.8436E+01	1.8934E+07	3.4006E+04	1.2817E+05	3.5000E+00	2.1857E+03	5.7347E+03	1.8573E+05
8.1897E+02	0.0000E+00	3.0359E+07	3.4006E+04	1.2142E+05	1.0152E+01	2.1857E+03	5.2936E+03	3.3457E+05
7.4872E+02	2.4543E+03	1.5693E+02	3.4006E+04	1.1468E+05	8.6804E+00	2.1857E+03	4.8525E+03	3.7631E+05
7.4872E+02	2.3375E+03	2.2712E+02	3.4006E+04	1.0793E+05	3.4304E+00	2.1857E+03	4.4113E+03	6.2896E+05
7.4872E+02	2.2790E+03	7.0190E+01	3.4006E+04	1.0118E+05	7.0000E+00	2.1857E+03	3.9702E+03	7.3829E+05
7.4872E+02	2.2206E+03	2.0459E+03	3.4006E+04	9.4439E+04	1.7500E+00	2.1857E+03	3.5291E+03	1.1780E+06
7.4872E+02	2.1621E+03	6.3421E+02	3.4006E+04	8.7693E+04	1.5611E+01	2.1857E+03	3.0879E+03	1.2280E+06
7.4872E+02	2.1037E+03	9.2711E+02	3.4006E+04	8.0948E+04	1.0500E+01	2.1857E+03	2.6468E+03	1.5221E+06
7.4872E+02	2.0453E+03	1.8454E+03	3.4006E+04	7.4202E+04	1.4000E+01	2.1857E+03	2.2057E+03	1.3261E+06
7.4872E+02	1.9868E+03	5.4399E+03	3.4006E+04	6.7456E+04	1.7222E+01	2.1857E+03	1.7645E+03	1.6667E+06
7.4872E+02	1.9284E+03	8.7972E+03	3.4006E+04	6.0711E+04	4.0058E+01	2.1857E+03	1.3234E+03	1.8822E+06
7.4872E+02	1.8700E+03	1.2647E+04	3.4006E+04	5.3965E+04	2.7861E+01	2.1857E+03	8.8227E+02	2.7136E+06
7.4872E+02	1.8115E+03	1.4712E+04	3.4006E+04	4.7219E+04	3.1194E+01	2.1857E+03	4.4113E+02	6.1680E+06
7.4872E+02	1.7531E+03	2.1919E+04	3.4006E+04	4.0474E+04	3.6111E+01	2.1857E+03	0.0000E+00	1.2554E+07
7.4872E+02	1.6947E+03	3.6337E+04	3.4006E+04	3.3728E+04	1.0321E+02	1.6343E+03	1.7204E+04	5.0151E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.4872E+02	1.6362E+03	5.3209E+04	3.4006E+04	2.6983E+04	6.7163E+01	1.6343E+03	1.6763E+04	5.5625E-02
7.4872E+02	1.5778E+03	7.8434E+04	3.4006E+04	2.0237E+04	1.8430E+02	1.6343E+03	1.5881E+04	2.3054E+00
7.4872E+02	1.5193E+03	8.3815E+04	3.4006E+04	1.3491E+04	7.1971E+01	1.6343E+03	1.1469E+04	2.6007E+01
7.4872E+02	1.4609E+03	1.4436E+05	3.4006E+04	6.7456E+03	3.4725E+04	1.6343E+03	1.1028E+04	3.8561E+02
7.4872E+02	1.4025E+03	1.4079E+05	3.4006E+04	0.0000E+00	2.6686E+04	1.6343E+03	1.0587E+04	2.8648E+02
7.4872E+02	1.3440E+03	3.0374E+05	2.6470E+04	1.8888E+05	5.5625E-02	1.6343E+03	1.0146E+04	2.5853E+02
7.4872E+02	1.2856E+03	3.3015E+05	2.6470E+04	1.6190E+05	1.6804E+00	1.6343E+03	9.7050E+03	9.9376E+02
7.4872E+02	1.2272E+03	4.8711E+05	2.6470E+04	1.5515E+05	3.4304E+00	1.6343E+03	9.2638E+03	7.5207E+03
7.4872E+02	1.1687E+03	6.2183E+05	2.6470E+04	1.4840E+05	5.1804E+00	1.6343E+03	8.8227E+03	6.9874E+03
7.4872E+02	1.1103E+03	7.7480E+05	2.6470E+04	1.4166E+05	3.3608E+00	1.6343E+03	8.3816E+03	1.2409E+04
7.4872E+02	1.0519E+03	1.0620E+06	2.6470E+04	1.3491E+05	5.1664E+00	1.6343E+03	7.9404E+03	4.5940E+04
7.4872E+02	9.9342E+02	1.3190E+06	2.6470E+04	1.2817E+05	7.0000E+00	1.6343E+03	7.4993E+03	5.6176E+04
7.4872E+02	9.3498E+02	1.7473E+06	2.6470E+04	1.2142E+05	3.5000E+00	1.6343E+03	7.0582E+03	9.3869E+04
7.4872E+02	8.7655E+02	2.1716E+06	2.6470E+04	1.1468E+05	5.9306E+00	1.6343E+03	6.6170E+03	1.4960E+05
7.4872E+02	8.1811E+02	2.8890E+06	2.6470E+04	1.0793E+05	3.4304E+00	1.6343E+03	6.1759E+03	1.9888E+05
7.4872E+02	7.5967E+02	3.5788E+06	2.6470E+04	1.0118E+05	5.2500E+00	1.6343E+03	5.7347E+03	4.9815E+05
7.4872E+02	7.0124E+02	4.2592E+06	2.6470E+04	9.4439E+04	1.2111E+01	1.6343E+03	5.2936E+03	5.0421E+05
7.4872E+02	6.4280E+02	5.0555E+06	2.6470E+04	8.7693E+04	1.2041E+01	1.6343E+03	4.8525E+03	7.6030E+05
7.4872E+02	5.8436E+02	5.8125E+06	2.6470E+04	8.0948E+04	2.9472E+01	1.6343E+03	4.4113E+03	9.4492E+05
7.4872E+02	5.2593E+02	6.4673E+06	2.6470E+04	7.4202E+04	5.0058E+01	1.6343E+03	3.9702E+03	1.4589E+06
7.4872E+02	4.6749E+02	6.9392E+06	2.6470E+04	6.7456E+04	3.8361E+01	1.6343E+03	3.5291E+03	1.6196E+06
7.4872E+02	4.0905E+02	7.4407E+06	2.6470E+04	6.0711E+04	4.6417E+01	1.6343E+03	3.0879E+03	1.8503E+06
7.4872E+02	3.5062E+02	6.9329E+06	2.6470E+04	5.3965E+04	5.3919E+01	1.6343E+03	2.6468E+03	2.5544E+06
7.4872E+02	2.9218E+02	6.7420E+06	2.6470E+04	4.7219E+04	5.9166E+01	1.6343E+03	2.2057E+03	2.8929E+06
7.4872E+02	2.3375E+02	5.3271E+06	2.6470E+04	4.0474E+04	1.1942E+02	1.6343E+03	1.7645E+03	2.5890E+06
7.4872E+02	1.7531E+02	4.5782E+06	2.6470E+04	3.3728E+04	2.0269E+02	1.6343E+03	1.3234E+03	2.9953E+06
7.4872E+02	1.1687E+02	7.1687E+06	2.6470E+04	2.6983E+04	2.4524E+02	1.6343E+03	8.8227E+02	4.2175E+06
7.4872E+02	5.8436E+01	2.2110E+07	2.6470E+04	2.0237E+04	3.2818E+02	1.6343E+03	4.4113E+02	9.3088E+06
7.4872E+02	0.0000E+00	3.5521E+07	2.6470E+04	1.3491E+04	1.7412E+04	1.6343E+03	0.0000E+00	1.9957E+07
6.7846E+02	2.3375E+03	1.4350E+03	2.6470E+04	6.7456E+03	6.5614E+04	1.0828E+03	1.7645E+04	5.5625E-02
6.7846E+02	2.2790E+03	2.1000E+03	2.6470E+04	0.0000E+00	2.6055E+05	1.0828E+03	1.6763E+04	8.0583E+01
6.7846E+02	2.2206E+03	8.9367E+02	1.8934E+04	1.9562E+05	1.1125E-01	1.0828E+03	1.6322E+04	6.5210E+01
6.7846E+02	2.1621E+03	2.6421E+03	1.8934E+04	1.7539E+05	6.2500E-01	1.0828E+03	1.4999E+04	5.9715E+00
6.7846E+02	2.1037E+03	9.7065E+03	1.8934E+04	1.6864E+05	6.2500E-01	1.0828E+03	1.4557E+04	5.3640E-01
6.7846E+02	2.0453E+03	6.3803E+03	1.8934E+04	1.6190E+05	5.5625E-02	1.0828E+03	1.4116E+04	2.1116E+00
6.7846E+02	1.9868E+03	4.9117E+03	1.8934E+04	1.5515E+05	5.5625E-02	1.0828E+03	1.3675E+04	6.6840E+01
6.7846E+02	1.9284E+03	1.4159E+04	1.8934E+04	1.4166E+05	2.3610E+00	1.0828E+03	1.3234E+04	7.8885E-02
6.7846E+02	1.8700E+03	1.1811E+04	1.8934E+04	1.3491E+05	3.5554E+00	1.0828E+03	1.2793E+04	1.08E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.7846E+02	1.8115E+03	1.2734E+04	1.8934E+04	1.2817E+05	1.7360E+00	1.0828E+03	1.2352E+04	4.7651E+01
6.7846E+02	1.7531E+03	2.3775E+04	1.8934E+04	1.2142E+05	3.4304E+00	1.0828E+03	1.1911E+04	2.1152E+01
6.7846E+02	1.6947E+03	2.9923E+04	1.8934E+04	1.0793E+05	6.2500E-01	1.0828E+03	1.1469E+04	6.4116E+01
6.7846E+02	1.6362E+03	6.8982E+04	1.8934E+04	1.0118E+05	1.3154E+01	1.0828E+03	1.1028E+04	2.9939E+02
6.7846E+02	1.5778E+03	6.8908E+04	1.8934E+04	9.4439E+04	2.1779E+01	1.0828E+03	1.0587E+04	2.3422E+03
6.7846E+02	1.5193E+03	1.0047E+05	1.8934E+04	8.7693E+04	2.6262E+01	1.0828E+03	1.0146E+04	2.0134E+04
6.7846E+02	1.4609E+03	1.3586E+05	1.8934E+04	8.0948E+04	4.7195E+01	1.0828E+03	9.7050E+03	9.9975E+03
6.7846E+02	1.4025E+03	1.8184E+05	1.8934E+04	7.4202E+04	6.9609E+01	1.0828E+03	9.2638E+03	1.1344E+04
6.7846E+02	1.3440E+03	2.2160E+05	1.8934E+04	6.7456E+04	1.0367E+02	1.0828E+03	8.8227E+03	2.0141E+04
6.7846E+02	1.2856E+03	2.9308E+05	1.8934E+04	6.0711E+04	6.7609E+01	1.0828E+03	8.3816E+03	6.2363E+04
6.7846E+02	1.2272E+03	3.5726E+05	1.8934E+04	5.3965E+04	2.2755E+02	1.0828E+03	7.9404E+03	4.8215E+04
6.7846E+02	1.1687E+03	4.8684E+05	1.8934E+04	4.7219E+04	4.3299E+03	1.0828E+03	7.4993E+03	1.2665E+05
6.7846E+02	1.1103E+03	6.6509E+05	1.8934E+04	4.0474E+04	2.4615E+03	1.0828E+03	7.0582E+03	1.5449E+05
6.7846E+02	1.0519E+03	9.1934E+05	1.8934E+04	3.3728E+04	4.0039E+02	1.0828E+03	6.6170E+03	2.3226E+05
6.7846E+02	9.9342E+02	1.1927E+06	1.8934E+04	2.6983E+04	9.1685E+03	1.0828E+03	6.1759E+03	3.4533E+05
6.7846E+02	9.3498E+02	1.5967E+06	1.8934E+04	2.0237E+04	9.6479E+02	1.0828E+03	5.7347E+03	5.9615E+05
6.7846E+02	8.7655E+02	2.0652E+06	1.8934E+04	1.3491E+04	1.0121E+04	1.0828E+03	5.2936E+03	8.1308E+05
6.7846E+02	8.1811E+02	2.5055E+06	1.8934E+04	6.7456E+03	1.2794E+05	1.0828E+03	4.8525E+03	1.1577E+06
6.7846E+02	7.5967E+02	3.0692E+06	1.8934E+04	0.0000E+00	5.1782E+05	1.0828E+03	4.4113E+03	1.4751E+06
6.7846E+02	7.0124E+02	3.6695E+06	1.1397E+04	3.1030E+05	1.6804E+00	1.0828E+03	3.9702E+03	1.8153E+06
6.7846E+02	6.4280E+02	4.5425E+06	1.1397E+04	2.9681E+05	1.6804E+00	1.0828E+03	3.5291E+03	2.3986E+06
6.7846E+02	5.8436E+02	5.2549E+06	1.1397E+04	2.0911E+05	5.5625E-02	1.0828E+03	3.0879E+03	2.9620E+06
6.7846E+02	5.2593E+02	6.0197E+06	1.1397E+04	1.8888E+05	5.5625E-02	1.0828E+03	2.6468E+03	3.8743E+06
6.7846E+02	4.6749E+02	6.5905E+06	1.1397E+04	1.6190E+05	5.5625E-02	1.0828E+03	2.2057E+03	4.1338E+06
6.7846E+02	4.0905E+02	6.8011E+06	1.1397E+04	1.4166E+05	5.0412E+00	1.0828E+03	1.7645E+03	4.6402E+06
6.7846E+02	3.5062E+02	7.0652E+06	1.1397E+04	1.3491E+05	4.1110E+00	1.0828E+03	1.3234E+03	4.9229E+06
6.7846E+02	2.9218E+02	7.0123E+06	1.1397E+04	1.2817E+05	4.1806E+00	1.0828E+03	8.8227E+02	6.4614E+06
6.7846E+02	2.3375E+02	5.9912E+06	1.1397E+04	1.2142E+05	5.5625E-02	1.0828E+03	4.4113E+02	1.4314E+07
6.7846E+02	1.7531E+02	5.3925E+06	1.1397E+04	1.1468E+05	2.4862E+00	1.0828E+03	0.0000E+00	3.1288E+07
6.7846E+02	1.1687E+02	7.4530E+06	1.1397E+04	1.0793E+05	5.3612E+00	5.3129E+02	1.7204E+04	1.5373E+01
6.7846E+02	5.8436E+01	2.2038E+07	1.1397E+04	1.0118E+05	9.4125E+00	5.3129E+02	1.6322E+04	1.7384E+02
6.7846E+02	0.0000E+00	3.4904E+07	1.1397E+04	9.4439E+04	6.4836E+03	5.3129E+02	1.5440E+04	2.7266E+02
6.0820E+02	2.5128E+03	7.1537E+02	1.1397E+04	8.7693E+04	6.4915E+03	5.3129E+02	1.4999E+04	5.5625E-02
6.0820E+02	2.4543E+03	6.9983E+01	1.1397E+04	8.0948E+04	1.2993E+04	5.3129E+02	1.4557E+04	2.2466E+02
6.0820E+02	2.3959E+03	7.0000E+02	1.1397E+04	7.4202E+04	1.3032E+04	5.3129E+02	1.4116E+04	2.1829E+02
6.0820E+02	2.3375E+03	1.6027E+02	1.1397E+04	6.7456E+04	6.6103E+03	5.3129E+02	1.3675E+04	5.8145E+02
6.0820E+02	2.2790E+03	1.5811E+03	1.1397E+04	6.0711E+04	1.3285E+04	5.3129E+02	1.3234E+04	2.2618E+03
6.0820E+02	2.2206E+03	2.5721E+03	1.1397E+04	5.3965E+04	3.2667E+04	5.3129E+02	1.2793E+04	5.0151E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.0820E+02	2.1621E+03	2.7327E+03	1.1397E+04	4.7219E+04	5.4380E+04	5.3129E+02	1.2352E+04	2.9542E+03
6.0820E+02	2.1037E+03	2.3024E+03	1.1397E+04	4.0474E+04	9.1904E+03	5.3129E+02	1.1911E+04	6.3955E+03
6.0820E+02	2.0453E+03	4.1590E+03	1.1397E+04	3.3728E+04	7.2168E+03	5.3129E+02	1.1469E+04	3.4738E+04
6.0820E+02	1.9868E+03	5.5026E+03	1.1397E+04	2.6983E+04	2.2376E+04	5.3129E+02	1.1028E+04	4.0568E+04
6.0820E+02	1.9284E+03	4.0885E+03	1.1397E+04	2.0237E+04	3.1462E+04	5.3129E+02	1.0587E+04	3.1746E+04
6.0820E+02	1.8700E+03	1.2392E+04	1.1397E+04	1.3491E+04	3.7886E+04	5.3129E+02	1.0146E+04	4.4653E+04
6.0820E+02	1.8115E+03	2.2986E+04	1.1397E+04	6.7456E+03	5.3972E+05	5.3129E+02	9.7050E+03	5.3126E+04
6.0820E+02	1.7531E+03	1.4058E+04	1.1397E+04	0.0000E+00	4.3482E+06	5.3129E+02	9.2638E+03	6.7710E+04
6.0820E+02	1.6947E+03	2.6532E+04	3.8610E+03	3.3728E+05	1.6804E+00	5.3129E+02	8.8227E+03	5.9189E+04
6.0820E+02	1.6362E+03	3.5221E+04	3.8610E+03	2.9681E+05	1.6804E+00	5.3129E+02	8.3816E+03	8.9432E+04
6.0820E+02	1.5778E+03	7.0629E+04	3.8610E+03	2.2261E+05	1.1125E-01	5.3129E+02	7.9404E+03	1.6610E+05
6.0820E+02	1.5193E+03	6.7319E+04	3.8610E+03	1.6864E+05	1.7360E+00	5.3129E+02	7.4993E+03	1.5144E+05
6.0820E+02	1.4609E+03	9.6871E+04	3.8610E+03	1.6190E+05	6.2500E-01	5.3129E+02	7.0582E+03	2.7292E+05
6.0820E+02	1.4025E+03	1.2118E+05	3.8610E+03	1.5515E+05	1.6804E+00	5.3129E+02	6.6170E+03	3.4956E+05
6.0820E+02	1.3440E+03	1.4709E+05	3.8610E+03	1.4840E+05	7.3625E-01	5.3129E+02	6.1759E+03	4.8167E+05
6.0820E+02	1.2856E+03	2.3450E+05	3.8610E+03	1.3491E+05	2.4166E+00	5.3129E+02	5.7347E+03	7.1466E+05
6.0820E+02	1.2272E+03	2.8771E+05	3.8610E+03	1.2817E+05	3.9858E+00	5.3129E+02	5.2936E+03	1.0891E+06
6.0820E+02	1.1687E+03	4.2955E+05	3.8610E+03	1.2142E+05	5.5625E-02	5.3129E+02	4.8525E+03	1.3674E+06
6.0820E+02	1.1103E+03	5.1421E+05	3.8610E+03	1.1468E+05	6.4696E+03	5.3129E+02	4.4113E+03	1.6864E+06
6.0820E+02	1.0519E+03	7.5047E+05	3.8610E+03	1.0793E+05	1.9398E+04	5.3129E+02	3.9702E+03	2.2444E+06
6.0820E+02	9.9342E+02	8.4345E+05	3.8610E+03	1.0118E+05	2.5883E+04	5.3129E+02	3.5291E+03	2.7570E+06
6.0820E+02	9.3498E+02	1.0808E+06	3.8610E+03	9.4439E+04	1.9438E+04	5.3129E+02	3.0879E+03	3.4845E+06
6.0820E+02	8.7655E+02	1.3706E+06	3.8610E+03	8.7693E+04	2.5901E+04	5.3129E+02	2.6468E+03	4.5351E+06
6.0820E+02	8.1811E+02	1.8816E+06	3.8610E+03	8.0948E+04	4.5368E+04	5.3129E+02	2.2057E+03	5.8589E+06
6.0820E+02	7.5967E+02	2.1440E+06	3.8610E+03	7.4202E+04	1.3790E+05	5.3129E+02	1.7645E+03	7.1357E+06
6.0820E+02	7.0124E+02	2.8701E+06	3.8610E+03	6.7456E+04	6.4797E+04	5.3129E+02	1.3234E+03	7.5007E+06
6.0820E+02	6.4280E+02	3.3412E+06	3.8610E+03	6.0711E+04	7.1494E+04	5.3129E+02	8.8227E+02	9.1602E+06
6.0820E+02	5.8436E+02	3.9472E+06	3.8610E+03	5.3965E+04	1.1044E+05	5.3129E+02	4.4113E+02	2.0738E+07
6.0820E+02	5.2593E+02	4.7051E+06	3.8610E+03	4.7219E+04	1.6930E+05	5.3129E+02	0.0000E+00	4.4277E+07
6.0820E+02	4.6749E+02	5.3384E+06	3.8610E+03	4.0474E+04	2.1690E+05	- 2.0190E+01	1.5881E+04	5.5625E-02
6.0820E+02	4.0905E+02	5.4919E+06	3.8610E+03	3.3728E+04	3.8373E+05	- 2.0190E+01	1.5440E+04	6.5563E+00
6.0820E+02	3.5062E+02	5.3818E+06	3.8610E+03	2.6983E+04	9.0858E+05	- 2.0190E+01	1.4999E+04	1.8941E+00
6.0820E+02	2.9218E+02	5.9306E+06	3.8610E+03	2.0237E+04	1.8453E+06	- 2.0190E+01	1.4557E+04	2.4116E+03
6.0820E+02	2.3375E+02	5.3189E+06	3.8610E+03	1.3491E+04	3.0972E+06	- 2.0190E+01	1.4116E+04	4.4726E+03
6.0820E+02	1.7531E+02	5.4169E+06	3.8610E+03	6.7456E+03	4.6112E+06	- 2.0190E+01	1.3675E+04	5.3126E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.0820E+02	1.1687E+02	6.8537E+06	3.8610E+03	0.0000E+00	1.7515E+07	-	1.3234E+04	9.6982E+03
6.0820E+02	5.8436E+01	2.1384E+07	-	3.3054E+05	1.6804E+00	-	1.2793E+04	2.4351E+04
6.0820E+02	0.0000E+00	3.6687E+07	-	3.1705E+05	1.6804E+00	-	1.2352E+04	4.4866E+04
5.3794E+02	2.7465E+03	6.2500E-01	-	2.6308E+05	1.6804E+00	-	1.1911E+04	4.5087E+04
5.3794E+02	2.6296E+03	7.1537E+02	-	2.2935E+05	5.5625E-02	-	1.1469E+04	7.2262E+04
5.3794E+02	2.5128E+03	5.5625E-02	-	2.0911E+05	5.5625E-02	-	1.1028E+04	9.9631E+04
5.3794E+02	2.4543E+03	5.9715E+00	-	2.0237E+05	5.5625E-02	-	1.0587E+04	1.1350E+05
5.3794E+02	2.3959E+03	1.5810E+03	-	1.7539E+05	1.1125E-01	-	1.0146E+04	7.9373E+04
5.3794E+02	2.3375E+03	2.4618E+02	-	1.4840E+05	3.4720E+00	-	9.7050E+03	4.6876E+04
5.3794E+02	2.2790E+03	1.4673E+03	-	1.4166E+05	1.6688E-01	-	9.2638E+03	1.2309E+05
5.3794E+02	2.2206E+03	1.6447E+03	-	1.3491E+05	9.6959E+00	-	8.8227E+03	1.4918E+05
5.3794E+02	2.1621E+03	2.7194E+03	-	1.2817E+05	1.7360E+00	-	8.3816E+03	1.4280E+05
5.3794E+02	2.1037E+03	1.5110E+03	-	1.2142E+05	2.7049E-01	-	7.9404E+03	1.8579E+05
5.3794E+02	2.0453E+03	3.0182E+03	-	1.1468E+05	7.9032E-01	-	7.4993E+03	2.7705E+05
5.3794E+02	1.9868E+03	1.4042E+03	-	1.0793E+05	1.2925E+00	-	7.0582E+03	3.5340E+05
5.3794E+02	1.9284E+03	5.3951E+03	-	1.0118E+05	2.3734E+01	-	6.6170E+03	4.5367E+05
5.3794E+02	1.8700E+03	3.6043E+03	-	9.4439E+04	6.5722E+03	-	6.1759E+03	6.8413E+05
5.3794E+02	1.8115E+03	8.5747E+03	-	8.7693E+04	8.5926E+03	-	5.7347E+03	7.8589E+05
5.3794E+02	1.7531E+03	9.6169E+03	-	8.0948E+04	2.1469E+03	-	5.2936E+03	1.2651E+06
5.3794E+02	1.6947E+03	1.5595E+04	-	7.4202E+04	5.6820E+01	-	4.8525E+03	1.4731E+06
5.3794E+02	1.6362E+03	2.7848E+04	-	6.7456E+04	7.6582E+03	-	4.4113E+03	2.1023E+06
5.3794E+02	1.5778E+03	2.3653E+04	-	6.0711E+04	6.7487E+03	-	3.9702E+03	2.8129E+06
5.3794E+02	1.5193E+03	5.2955E+04	-	5.3965E+04	3.2680E+04	-	3.5291E+03	3.7073E+06
5.3794E+02	1.4609E+03	5.8557E+04	-	4.7219E+04	2.7792E+04	-	3.0879E+03	4.5675E+06
5.3794E+02	1.4025E+03	8.1901E+04	-	4.0474E+04	5.2360E+04	-	2.6468E+03	6.0540E+06
5.3794E+02	1.3440E+03	1.2847E+05	-	3.3728E+04	2.0010E+05	-	2.2057E+03	7.3639E+06
5.3794E+02	1.2856E+03	1.3414E+05	-	2.6983E+04	5.0112E+05	-	1.7645E+03	9.1875E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.3794E+02	1.2272E+03	1.8876E+05	-	2.0237E+04	9.7045E+05	-	1.3234E+03	9.9944E+06
5.3794E+02	1.1687E+03	2.5225E+05	-	1.3491E+04	1.7948E+06	-	8.8227E+02	1.1267E+07
5.3794E+02	1.1103E+03	3.1487E+05	-	6.7456E+03	2.9784E+06	-	4.4113E+02	2.4920E+07
5.3794E+02	1.0519E+03	3.9120E+05	-	0.0000E+00	1.1003E+07	-	0.0000E+00	5.3616E+07
5.3794E+02	9.9342E+02	5.0445E+05	-	3.1030E+05	1.6804E+00	-	1.6322E+04	2.1480E+00
5.3794E+02	9.3498E+02	5.9509E+05	-	2.9681E+05	1.7500E+00	-	1.5881E+04	3.3581E+00
5.3794E+02	8.7655E+02	8.2166E+05	-	2.8332E+05	1.7500E+00	-	1.5440E+04	6.8271E+01
5.3794E+02	8.1811E+02	1.0065E+06	-	2.6308E+05	3.5556E+00	-	1.4999E+04	4.1135E+01
5.3794E+02	7.5967E+02	1.0994E+06	-	2.2935E+05	1.8056E+00	-	1.4557E+04	1.0822E+03
5.3794E+02	7.0124E+02	1.2994E+06	-	2.2261E+05	6.2500E-01	-	1.4116E+04	2.1300E+03
5.3794E+02	6.4280E+02	1.6908E+06	-	2.0237E+05	5.5625E-02	-	1.3675E+04	7.9592E+03
5.3794E+02	5.8436E+02	1.9372E+06	-	1.9562E+05	5.5625E-02	-	1.3234E+04	1.6462E+04
5.3794E+02	5.2593E+02	2.2604E+06	-	1.8888E+05	5.5625E-02	-	1.2793E+04	2.9021E+04
5.3794E+02	4.6749E+02	2.4992E+06	-	1.8213E+05	6.8063E-01	-	1.2352E+04	4.6973E+04
5.3794E+02	4.0905E+02	3.0733E+06	-	1.7539E+05	1.1125E-01	-	1.1911E+04	9.2091E+04
5.3794E+02	3.5062E+02	3.4284E+06	-	1.6864E+05	5.5625E-02	-	1.1469E+04	8.6818E+04
5.3794E+02	2.9218E+02	3.9258E+06	-	1.6190E+05	1.1125E-01	-	1.1028E+04	7.8540E+04
5.3794E+02	2.3375E+02	4.6324E+06	-	1.5515E+05	5.5625E-02	-	1.0587E+04	1.2933E+05
5.3794E+02	1.7531E+02	4.7816E+06	-	1.4840E+05	1.6688E-01	-	1.0146E+04	1.1367E+05
5.3794E+02	1.1687E+02	7.1882E+06	-	1.4166E+05	6.4901E-02	-	9.7050E+03	9.9195E+04
5.3794E+02	5.8436E+01	2.1664E+07	-	1.3491E+05	2.2250E-01	-	9.2638E+03	1.3994E+05
5.3794E+02	0.0000E+00	4.1154E+07	-	1.2817E+05	3.3220E-01	-	8.8227E+03	1.3514E+05
4.6769E+02	2.8634E+03	6.2500E-01	-	1.2142E+05	1.4039E+01	-	8.3816E+03	1.4403E+05
4.6769E+02	2.7465E+03	6.5105E+00	-	1.1468E+05	5.4927E+01	-	7.9404E+03	1.7185E+05
4.6769E+02	2.6296E+03	7.0765E+02	-	1.0793E+05	9.1401E+01	-	7.4993E+03	2.7264E+05
4.6769E+02	2.5712E+03	7.0953E+02	-	1.0118E+05	7.9357E+01	-	7.0582E+03	3.2739E+05
4.6769E+02	2.5128E+03	1.6406E+02	-	9.4439E+04	2.2548E+03	-	6.6170E+05	4.7686E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6769E+02	2.4543E+03	5.5625E-02	-	8.7693E+04	6.0554E+01	-	6.1759E+03	6.4376E+05
4.6769E+02	2.3959E+03	7.0651E+02	-	8.0948E+04	5.4118E+02	-	5.7347E+03	8.4308E+05
4.6769E+02	2.3375E+03	2.3634E+01	-	7.4202E+04	1.3923E+03	-	5.2936E+03	1.1709E+06
4.6769E+02	2.2790E+03	7.6469E+01	-	6.7456E+04	6.9416E+03	-	4.8525E+03	1.4811E+06
4.6769E+02	2.2206E+03	1.8907E+02	-	6.0711E+04	1.0907E+04	-	4.4113E+03	2.1216E+06
4.6769E+02	2.1621E+03	5.4517E+01	-	5.3965E+04	2.4764E+04	-	3.9702E+03	2.5538E+06
4.6769E+02	2.1037E+03	3.7431E+02	-	4.7219E+04	7.1814E+04	-	3.5291E+03	3.2204E+06
4.6769E+02	2.0453E+03	5.5819E+02	-	4.0474E+04	1.4378E+05	-	3.0879E+03	4.1924E+06
4.6769E+02	1.9868E+03	3.4770E+03	-	3.3728E+04	3.7305E+05	-	2.6468E+03	5.5538E+06
4.6769E+02	1.9284E+03	5.1810E+02	-	2.6983E+04	6.8488E+05	-	2.2057E+03	6.4119E+06
4.6769E+02	1.8700E+03	3.5387E+03	-	2.0237E+04	1.3486E+06	-	1.7645E+03	7.0694E+06
4.6769E+02	1.8115E+03	3.1271E+03	-	1.3491E+04	1.6242E+06	-	1.3234E+03	7.3506E+06
4.6769E+02	1.7531E+03	3.7501E+03	-	6.7456E+03	3.5224E+06	-	8.8227E+02	9.7457E+06
4.6769E+02	1.6947E+03	5.6111E+03	-	0.0000E+00	9.7383E+06	-	4.4113E+02	2.0595E+07
4.6769E+02	1.6362E+03	6.4533E+03	-	3.2379E+05	1.6804E+00	-	0.0000E+00	4.3937E+07
4.6769E+02	1.5778E+03	9.4191E+03	-	3.0355E+05	6.5105E+00	-	1.8528E+04	1.0420E+02
4.6769E+02	1.5193E+03	1.5338E+04	-	2.9681E+05	3.3608E+00	-	1.7645E+04	5.5625E-02
4.6769E+02	1.4609E+03	2.1116E+04	-	2.9006E+05	1.7500E+00	-	1.7204E+04	1.3021E+00
4.6769E+02	1.4025E+03	1.9947E+04	-	2.8332E+05	3.5000E+00	-	1.5881E+04	2.0560E+00
4.6769E+02	1.3440E+03	4.0392E+04	-	2.7657E+05	1.7500E+00	-	1.5440E+04	7.7745E+01
4.6769E+02	1.2856E+03	3.5321E+04	-	2.6983E+05	1.7500E+00	-	1.4999E+04	7.1513E+01
4.6769E+02	1.2272E+03	5.3843E+04	-	2.6308E+05	3.5000E+00	-	1.4557E+04	4.0904E+02
4.6769E+02	1.1687E+03	8.0186E+04	-	2.5633E+05	5.2500E+00	-	1.4116E+04	1.6351E+03
4.6769E+02	1.1103E+03	9.0508E+04	-	2.4959E+05	2.3750E+00	-	1.3675E+04	4.7028E+03
4.6769E+02	1.0519E+03	1.0703E+05	-	2.2261E+05	6.2500E-01	-	1.3234E+04	6.4020E+03
4.6769E+02	9.9342E+02	1.1144E+05	-	2.1586E+05	5.5625E-02	-	1.2793E+04	1.2183E+04
4.6769E+02	9.3498E+02	1.5305E+05	-	2.0911E+05	7.9188E-01	-	1.2352E+04	2.0100E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6769E+02	8.7655E+02	2.0283E+05	-	1.9562E+05	5.5625E-02	-	1.1911E+04	3.5294E+04
4.6769E+02	8.1811E+02	2.6141E+05	-	1.7539E+05	1.1125E-01	-	1.1469E+04	2.3830E+04
4.6769E+02	7.5967E+02	3.2019E+05	-	1.6864E+05	1.1125E-01	-	1.1028E+04	3.9204E+04
4.6769E+02	7.0124E+02	3.3322E+05	-	1.6190E+05	2.2250E-01	-	1.0587E+04	4.6804E+04
4.6769E+02	6.4280E+02	3.9547E+05	-	1.5515E+05	1.1125E-01	-	1.0146E+04	7.6178E+04
4.6769E+02	5.8436E+02	5.4309E+05	-	1.4840E+05	2.2250E-01	-	9.7050E+03	6.7980E+04
4.6769E+02	5.2593E+02	5.7164E+05	-	1.4166E+05	1.4118E+01	-	9.2638E+03	7.1821E+04
4.6769E+02	4.6749E+02	9.1268E+05	-	1.3491E+05	1.1125E-01	-	8.8227E+03	1.3556E+05
4.6769E+02	4.0905E+02	1.3882E+06	-	1.2817E+05	2.6985E+00	-	8.3816E+03	1.1471E+05
4.6769E+02	3.5062E+02	2.2217E+06	-	1.2142E+05	5.3248E+01	-	7.9404E+03	1.4720E+05
4.6769E+02	2.9218E+02	3.6075E+06	-	1.1468E+05	1.0849E+02	-	7.4993E+03	2.5207E+05
4.6769E+02	2.3375E+02	6.1703E+06	-	1.0793E+05	4.8102E+01	-	7.0582E+03	2.6383E+05
4.6769E+02	1.7531E+02	7.6777E+06	-	1.0118E+05	4.3040E+03	-	6.6170E+03	4.7147E+05
4.6769E+02	1.1687E+02	9.7687E+06	-	9.4439E+04	3.8804E+02	-	6.1759E+03	5.2183E+05
4.6769E+02	5.8436E+01	2.3563E+07	-	8.7693E+04	4.0126E+02	-	5.7347E+03	7.8908E+05
4.6769E+02	0.0000E+00	4.8132E+07	-	8.0948E+04	5.0079E+03	-	5.2936E+03	1.0535E+06
3.9743E+02	2.6881E+03	5.5625E-02	-	7.4202E+04	6.7485E+03	-	4.8525E+03	1.2915E+06
3.9743E+02	2.5712E+03	1.4162E+01	-	6.7456E+04	4.4564E+03	-	4.4113E+03	1.7675E+06
3.9743E+02	2.5128E+03	8.1909E+00	-	6.0711E+04	2.0236E+04	-	3.9702E+03	2.1734E+06
3.9743E+02	2.4543E+03	7.0651E+02	-	5.3965E+04	3.7337E+04	-	3.5291E+03	2.7610E+06
3.9743E+02	2.3959E+03	2.6582E+01	-	4.7219E+04	5.2206E+04	-	3.0879E+03	3.0352E+06
3.9743E+02	2.3375E+03	2.6586E+02	-	4.0474E+04	1.6306E+05	-	2.6468E+03	3.9509E+06
3.9743E+02	2.2790E+03	2.8136E+01	-	3.3728E+04	4.5599E+05	-	2.2057E+03	4.4922E+06
3.9743E+02	2.2206E+03	2.9751E+01	-	2.6983E+04	1.5274E+06	-	1.7645E+03	4.7176E+06
3.9743E+02	2.1621E+03	9.0112E+01	-	2.0237E+04	3.2012E+06	-	1.3234E+03	4.8153E+06
3.9743E+02	2.1037E+03	3.3938E+02	-	1.3491E+04	5.1357E+06	-	8.8227E+02	6.7605E+06
3.9743E+02	2.0453E+03	1.9955E+02	-	6.7456E+03	9.3320E+06	-	4.4113E+02	1.8798E+07

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.9743E+02	1.9868E+03	2.5207E+03	-	0.0000E+00	2.1098E+07	-	0.0000E+00	3.2999E+07
3.9743E+02	1.9284E+03	3.5117E+02	-	3.2379E+05	1.6804E+00	-	1.8969E+04	5.5625E-02
3.9743E+02	1.8700E+03	5.0651E+02	-	3.1705E+05	9.8713E+00	-	1.7204E+04	9.2025E-02
3.9743E+02	1.8115E+03	7.2315E+02	-	3.1030E+05	1.6804E+00	-	1.6763E+04	5.5625E-02
3.9743E+02	1.7531E+03	5.2936E+03	-	3.0355E+05	3.3608E+00	-	1.6322E+04	2.0560E+00
3.9743E+02	1.6947E+03	1.9551E+03	-	2.9681E+05	1.7500E+00	-	1.5881E+04	5.5625E-02
3.9743E+02	1.6362E+03	3.2985E+03	-	2.9006E+05	5.1108E+00	-	1.5440E+04	8.0612E+00
3.9743E+02	1.5778E+03	1.0968E+03	-	2.8332E+05	8.5412E+00	-	1.4999E+04	1.9195E+02
3.9743E+02	1.5193E+03	4.1847E+03	-	2.7657E+05	3.5000E+00	-	1.4557E+04	1.4099E+03
3.9743E+02	1.4609E+03	1.4759E+03	-	2.6983E+05	1.1691E+01	-	1.4116E+04	2.1935E+02
3.9743E+02	1.4025E+03	3.7352E+03	-	2.6308E+05	1.7500E+00	-	1.3675E+04	9.4800E+02
3.9743E+02	1.3440E+03	1.7133E+03	-	2.5633E+05	1.7500E+00	-	1.3234E+04	5.3362E+02
3.9743E+02	1.2856E+03	4.9711E+03	-	2.4959E+05	2.4306E+00	-	1.2793E+04	6.0967E+02
3.9743E+02	1.2272E+03	1.0044E+04	-	2.4284E+05	4.1250E+00	-	1.2352E+04	1.8167E+03
3.9743E+02	1.1687E+03	7.3588E+03	-	2.3610E+05	1.7500E+00	-	1.1911E+04	3.3585E+03
3.9743E+02	1.1103E+03	1.4831E+04	-	2.2935E+05	8.2605E+00	-	1.1469E+04	4.5699E+03
3.9743E+02	1.0519E+03	2.2697E+04	-	2.2261E+05	6.8063E-01	-	1.1028E+04	1.1096E+04
3.9743E+02	9.9342E+02	3.0484E+04	-	2.0911E+05	6.8063E-01	-	1.0587E+04	2.5183E+04
3.9743E+02	9.3498E+02	4.0668E+04	-	2.0237E+05	5.5625E-02	-	1.0146E+04	1.7207E+04
3.9743E+02	8.7655E+02	5.5617E+04	-	1.8888E+05	2.4862E+00	-	9.7050E+03	2.7971E+04
3.9743E+02	8.1811E+02	4.4068E+04	-	1.8213E+05	1.1125E-01	-	9.2638E+03	4.2519E+04
3.9743E+02	7.5967E+02	6.2878E+04	-	1.7539E+05	2.1487E-01	-	8.8227E+03	3.8870E+04
3.9743E+02	7.0124E+02	9.0593E+04	-	1.6864E+05	5.5625E-02	-	8.3816E+03	9.2692E+04
3.9743E+02	6.4280E+02	1.6603E+05	-	1.6190E+05	1.2500E+00	-	7.9404E+03	8.7067E+04
3.9743E+02	5.8436E+02	2.0904E+05	-	1.5515E+05	1.1125E-01	-	7.4993E+03	1.6839E+05
3.9743E+02	5.2593E+02	2.6771E+05	-	1.4840E+05	1.7624E+01	-	7.0582E+03	1.6060E+05
3.9743E+02	4.6749E+02	5.0810E+05	-	1.4166E+05	2.6036E+00	-	6.6170E+03	2.5507E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.9743E+02	4.0905E+02	9.0418E+05	-	1.3491E+05	1.6757E+01	-	6.1759E+03	6.0403E+05
3.9743E+02	3.5062E+02	2.0212E+06	-	1.2817E+05	1.1691E+02	-	5.7347E+03	6.8990E+05
3.9743E+02	2.9218E+02	3.6141E+06	-	1.2142E+05	8.3559E+00	-	5.2936E+03	8.5498E+05
3.9743E+02	2.3375E+02	6.0435E+06	-	1.1468E+05	3.3142E+01	-	4.8525E+03	1.1033E+06
3.9743E+02	1.7531E+02	8.2180E+06	-	1.0793E+05	3.6683E+01	-	4.4113E+03	1.4240E+06
3.9743E+02	1.1687E+02	9.9772E+06	-	1.0118E+05	1.3074E+03	-	3.9702E+03	1.6895E+06
3.9743E+02	5.8436E+01	1.7779E+07	-	9.4439E+04	1.6734E+02	-	3.5291E+03	2.1197E+06
3.9743E+02	0.0000E+00	4.5103E+07	-	8.7693E+04	3.8773E+02	-	3.0879E+03	2.6968E+06
3.2717E+02	2.7465E+03	3.3608E+00	-	8.0948E+04	4.6206E+03	-	2.6468E+03	3.0298E+06
3.2717E+02	2.6296E+03	8.2465E+00	-	7.4202E+04	1.0666E+04	-	2.2057E+03	3.0104E+06
3.2717E+02	2.5712E+03	1.8613E+00	-	6.7456E+04	2.2243E+04	-	1.7645E+03	2.8232E+06
3.2717E+02	2.4543E+03	1.3021E+01	-	6.0711E+04	2.7730E+04	-	1.3234E+03	3.1224E+06
3.2717E+02	2.3959E+03	1.6382E+01	-	5.3965E+04	4.8166E+04	-	8.8227E+02	4.5204E+06
3.2717E+02	2.3375E+03	6.8608E+00	-	4.7219E+04	1.0895E+05	-	4.4113E+02	1.1053E+07
3.2717E+02	2.2790E+03	1.6860E+02	-	4.0474E+04	2.3734E+05	-	0.0000E+00	2.1674E+07
3.2717E+02	2.2206E+03	2.0576E+01	-	3.3728E+04	5.6743E+05	-	1.9410E+04	1.1125E-01
3.2717E+02	2.1621E+03	8.8159E+00	-	2.6983E+04	1.4716E+06	-	1.8087E+04	7.3625E-01
3.2717E+02	2.1037E+03	9.4575E+00	-	2.0237E+04	4.3514E+06	-	1.6763E+04	5.5625E-02
3.2717E+02	2.0453E+03	1.6804E+00	-	1.3491E+04	7.5378E+06	-	1.6322E+04	1.5613E+01
3.2717E+02	1.9868E+03	2.0493E+01	-	6.7456E+03	1.3444E+07	-	1.5881E+04	3.0920E+00
3.2717E+02	1.9284E+03	3.0195E+01	-	0.0000E+00	2.7308E+07	-	1.4999E+04	5.6431E+00
3.2717E+02	1.8700E+03	5.9360E+01	-	3.0355E+05	3.3608E+00	-	1.4557E+04	2.8658E+02
3.2717E+02	1.8115E+03	3.1798E+01	-	2.9006E+05	1.6804E+00	-	1.4116E+04	1.0981E+02
3.2717E+02	1.7531E+03	2.0929E+01	-	2.7657E+05	1.0010E+01	-	1.3675E+04	2.5927E+01
3.2717E+02	1.6947E+03	1.3511E+02	-	2.6983E+05	6.8608E+00	-	1.3234E+04	1.0463E+02
3.2717E+02	1.6362E+03	5.2669E+01	-	2.6308E+05	1.3441E+01	-	1.2793E+04	1.3151E+02
3.2717E+02	1.5778E+03	1.4779E+02	-	2.5633E+05	1.8056E+00	-	1.2352E+04	2.5404E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.2717E+02	1.5193E+03	2.8997E+02	-	2.4959E+05	1.7500E+00	-	1.1911E+04	2.0642E+02
3.2717E+02	1.4609E+03	1.8918E+02	-	2.4284E+05	6.9304E+00	-	1.1469E+04	1.1831E+03
3.2717E+02	1.4025E+03	4.5333E+02	-	2.3610E+05	1.0635E+01	-	1.1028E+04	1.6444E+03
3.2717E+02	1.3440E+03	9.7047E+02	-	2.2935E+05	6.2500E-01	-	1.0587E+04	6.9940E+02
3.2717E+02	1.2856E+03	9.0479E+02	-	2.0911E+05	6.2500E-01	-	1.0146E+04	3.8090E+03
3.2717E+02	1.2272E+03	2.1868E+03	-	2.0237E+05	1.3612E+00	-	9.7050E+03	5.6738E+03
3.2717E+02	1.1687E+03	1.3595E+03	-	1.9562E+05	1.2500E+00	-	9.2638E+03	5.7148E+03
3.2717E+02	1.1103E+03	2.2657E+03	-	1.8888E+05	1.8056E+00	-	8.8227E+03	3.1710E+04
3.2717E+02	1.0519E+03	5.9541E+03	-	1.8213E+05	6.8063E-01	-	8.3816E+03	2.8735E+04
3.2717E+02	9.9342E+02	7.2783E+03	-	1.7539E+05	5.5625E-02	-	7.9404E+03	4.0274E+04
3.2717E+02	9.3498E+02	1.1927E+04	-	1.6864E+05	1.7178E+00	-	7.4993E+03	9.6041E+04
3.2717E+02	8.7655E+02	1.5964E+04	-	1.6190E+05	1.5481E+01	-	7.0582E+03	1.5295E+05
3.2717E+02	8.1811E+02	1.7929E+04	-	1.5515E+05	1.7252E+00	-	6.6170E+03	2.2069E+05
3.2717E+02	7.5967E+02	2.7578E+04	-	1.4840E+05	1.3919E+01	-	6.1759E+03	2.5364E+05
3.2717E+02	7.0124E+02	5.7616E+04	-	1.4166E+05	8.3941E+00	-	5.7347E+03	3.5646E+05
3.2717E+02	6.4280E+02	1.0300E+05	-	1.3491E+05	2.1124E+01	-	5.2936E+03	5.1471E+05
3.2717E+02	5.8436E+02	1.8195E+05	-	1.2817E+05	1.3176E+02	-	4.8525E+03	8.5808E+05
3.2717E+02	5.2593E+02	3.1400E+05	-	1.2142E+05	2.8493E+01	-	4.4113E+03	1.0806E+06
3.2717E+02	4.6749E+02	7.3071E+05	-	1.1468E+05	1.9892E+02	-	3.9702E+03	1.4479E+06
3.2717E+02	4.0905E+02	1.2836E+06	-	1.0793E+05	4.3975E+02	-	3.5291E+03	1.7070E+06
3.2717E+02	3.5062E+02	2.0717E+06	-	1.0118E+05	2.2939E+02	-	3.0879E+03	1.8103E+06
3.2717E+02	2.9218E+02	4.2213E+06	-	9.4439E+04	1.9190E+03	-	2.6468E+03	2.1055E+06
3.2717E+02	2.3375E+02	6.3932E+06	-	8.7693E+04	3.7728E+03	-	2.2057E+03	1.8562E+06
3.2717E+02	1.7531E+02	8.9755E+06	-	8.0948E+04	4.6410E+03	-	1.7645E+03	1.9671E+06
3.2717E+02	1.1687E+02	1.0075E+07	-	7.4202E+04	7.6949E+03	-	1.3234E+03	2.1921E+06
3.2717E+02	5.8436E+01	1.3686E+07	-	6.7456E+04	2.0904E+04	-	8.8227E+02	3.3098E+06
3.2717E+02	0.0000E+00	3.9332E+07	-	6.0711E+04	6.6812E+03	-	4.4113E+02	7.5790E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.5692E+02	2.8049E+03	1.7500E+00	-	5.3965E+04	2.3479E+04	-	0.0000E+00	1.4546E+07
2.5692E+02	2.6296E+03	1.6804E+00	-	4.7219E+04	1.0943E+05	-	1.8528E+04	7.3625E-01
2.5692E+02	2.5128E+03	8.8159E+00	-	4.0474E+04	2.0118E+05	-	1.7645E+04	1.1125E-01
2.5692E+02	2.4543E+03	3.3608E+00	-	3.3728E+04	4.3822E+05	-	1.6763E+04	1.6804E+00
2.5692E+02	2.3375E+03	1.0052E+01	-	2.6983E+04	1.4322E+06	-	1.6322E+04	1.4765E-01
2.5692E+02	2.2790E+03	8.6108E+00	-	2.0237E+04	3.2039E+06	-	1.5440E+04	1.8011E+01
2.5692E+02	2.2206E+03	6.8608E+00	-	1.3491E+04	5.4902E+06	-	1.4999E+04	1.7720E+01
2.5692E+02	2.1621E+03	1.8613E+00	-	6.7456E+03	1.0104E+07	-	1.4557E+04	1.0415E+01
2.5692E+02	2.1037E+03	1.8201E+01	-	0.0000E+00	2.1494E+07	-	1.4116E+04	2.1698E+00
2.5692E+02	2.0453E+03	2.4903E+02	-	3.0355E+05	3.3608E+00	-	1.3675E+04	2.0856E+01
2.5692E+02	1.9868E+03	1.8993E+01	-	2.9006E+05	1.8132E+01	-	1.3234E+04	2.3899E+01
2.5692E+02	1.9284E+03	7.5380E+01	-	2.7657E+05	6.7912E+00	-	1.2793E+04	4.2551E+01
2.5692E+02	1.8700E+03	1.6188E+01	-	2.6983E+05	3.4304E+00	-	1.2352E+04	4.2108E+01
2.5692E+02	1.8115E+03	8.9547E+00	-	2.6308E+05	5.1108E+00	-	1.1911E+04	1.5474E+02
2.5692E+02	1.7531E+03	1.7519E+01	-	2.5633E+05	1.1621E+01	-	1.1469E+04	1.5202E+02
2.5692E+02	1.6947E+03	5.3793E+01	-	2.4959E+05	1.2246E+01	-	1.1028E+04	4.4473E+01
2.5692E+02	1.6362E+03	3.6464E+01	-	2.4284E+05	1.7500E+00	-	1.0587E+04	1.0234E+03
2.5692E+02	1.5778E+03	2.2665E+01	-	2.3610E+05	3.5556E+00	-	1.0146E+04	1.3430E+02
2.5692E+02	1.5193E+03	4.6866E+01	-	2.2935E+05	3.5556E+00	-	9.7050E+03	1.1664E+02
2.5692E+02	1.4609E+03	1.5408E+02	-	2.2261E+05	8.3717E+00	-	9.2638E+03	4.3406E+02
2.5692E+02	1.4025E+03	3.4888E+02	-	2.1586E+05	5.5625E-02	-	8.8227E+03	3.1417E+03
2.5692E+02	1.3440E+03	9.1218E+01	-	2.0911E+05	5.5625E-02	-	8.3816E+03	4.4547E+03
2.5692E+02	1.2856E+03	2.6235E+02	-	2.0237E+05	1.2596E+01	-	7.9404E+03	1.2876E+04
2.5692E+02	1.2272E+03	5.6247E+02	-	1.9562E+05	1.7636E+00	-	7.4993E+03	2.9172E+04
2.5692E+02	1.1687E+03	4.3297E+02	-	1.8888E+05	1.2540E+01	-	7.0582E+03	2.8916E+04
2.5692E+02	1.1103E+03	7.5321E+02	-	1.8213E+05	1.4929E+01	-	6.6170E+03	7.9732E+04
2.5692E+02	1.0519E+03	7.0946E+02	-	1.7539E+05	1.8056E+00	-	6.1759E+03	1.3206E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.5692E+02	9.9342E+02	1.6487E+03	-	1.6864E+05	2.5002E+00	-	5.7347E+03	2.7886E+05
2.5692E+02	9.3498E+02	1.8876E+03	-	1.6190E+05	1.5924E-01	-	5.2936E+03	3.7331E+05
2.5692E+02	8.7655E+02	5.6536E+03	-	1.5515E+05	2.5797E+01	-	4.8525E+03	5.0767E+05
2.5692E+02	8.1811E+02	6.7161E+03	-	1.4840E+05	2.5008E+00	-	4.4113E+03	5.8308E+05
2.5692E+02	7.5967E+02	6.8687E+03	-	1.4166E+05	1.1340E+01	-	3.9702E+03	9.0776E+05
2.5692E+02	7.0124E+02	1.6335E+04	-	1.3491E+05	4.2589E+01	-	3.5291E+03	8.9388E+05
2.5692E+02	6.4280E+02	2.8195E+04	-	1.2817E+05	2.9936E+02	-	3.0879E+03	1.1561E+06
2.5692E+02	5.8436E+02	5.3208E+04	-	1.2142E+05	2.3751E+02	-	2.6468E+03	1.3280E+06
2.5692E+02	5.2593E+02	1.5440E+05	-	1.1468E+05	3.6655E+02	-	2.2057E+03	1.2144E+06
2.5692E+02	4.6749E+02	3.6365E+05	-	1.0793E+05	1.0722E+03	-	1.7645E+03	1.2893E+06
2.5692E+02	4.0905E+02	7.3784E+05	-	1.0118E+05	9.5362E+02	-	1.3234E+03	1.1941E+06
2.5692E+02	3.5062E+02	1.5518E+06	-	9.4439E+04	1.5006E+03	-	8.8227E+02	2.3028E+06
2.5692E+02	2.9218E+02	2.9766E+06	-	8.7693E+04	2.1306E+03	-	4.4113E+02	5.0009E+06
2.5692E+02	2.3375E+02	5.4976E+06	-	8.0948E+04	2.1297E+03	-	0.0000E+00	9.4990E+06
2.5692E+02	1.7531E+02	7.8128E+06	-	7.4202E+04	4.3963E+03	-	2.2057E+04	5.5625E-02
2.5692E+02	1.1687E+02	1.0387E+07	-	6.7456E+04	1.0060E+04	-	1.5440E+04	1.7254E+00
2.5692E+02	5.8436E+01	1.5821E+07	-	6.0711E+04	1.8131E+04	-	1.4999E+04	9.2025E-02
2.5692E+02	0.0000E+00	4.5181E+07	-	5.3965E+04	3.3219E+04	-	1.4557E+04	1.6067E+01
1.8666E+02	2.9218E+03	5.5625E-02	-	4.7219E+04	1.4244E+05	-	1.4116E+04	4.2022E+00
1.8666E+02	2.8049E+03	1.6804E+00	-	4.0474E+04	2.6719E+05	-	1.3675E+04	1.1268E+02
1.8666E+02	2.6881E+03	1.6804E+00	-	3.3728E+04	7.1927E+05	-	1.3234E+04	5.7545E+00
1.8666E+02	2.6296E+03	6.5105E+00	-	2.6983E+04	1.7534E+06	-	1.2793E+04	5.9203E-01
1.8666E+02	2.5712E+03	1.7500E+00	-	2.0237E+04	2.9801E+06	-	1.2352E+04	1.2721E+01
1.8666E+02	2.5128E+03	1.6804E+00	-	1.3491E+04	4.0806E+06	-	1.1911E+04	5.3110E+00
1.8666E+02	2.4543E+03	8.1909E+00	-	6.7456E+03	7.7623E+06	-	1.1469E+04	5.3410E+00
1.8666E+02	2.3959E+03	3.5416E+00	-	0.0000E+00	1.4274E+07	-	1.1028E+04	6.9452E+00
1.8666E+02	2.3375E+03	3.5556E+00	-	3.0355E+05	3.3608E+00	-	1.0587E+04	6.9121E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.8666E+02	2.2790E+03	1.7720E+01	-	2.9006E+05	6.5105E+00	-	1.0146E+04	3.3298E+02
1.8666E+02	2.2206E+03	4.2223E+00	-	2.8332E+05	3.4304E+00	-	9.7050E+03	2.3509E+01
1.8666E+02	2.1621E+03	5.3056E+00	-	2.7657E+05	2.2892E+01	-	9.2638E+03	7.9128E+01
1.8666E+02	2.1037E+03	2.3750E+00	-	2.6983E+05	3.4304E+00	-	8.8227E+03	2.8931E+03
1.8666E+02	2.0453E+03	3.5416E+00	-	2.6308E+05	6.7912E+00	-	8.3816E+03	4.6883E+02
1.8666E+02	1.9868E+03	1.1125E-01	-	2.5633E+05	8.1909E+00	-	7.9404E+03	2.7448E+03
1.8666E+02	1.9284E+03	1.3077E+01	-	2.4959E+05	6.5105E+00	-	7.4993E+03	3.3654E+03
1.8666E+02	1.8700E+03	2.1448E+01	-	2.4284E+05	1.6804E+00	-	7.0582E+03	5.1249E+03
1.8666E+02	1.8115E+03	1.3132E+01	-	2.3610E+05	3.5556E+00	-	6.6170E+03	1.9867E+04
1.8666E+02	1.7531E+03	4.1147E+01	-	2.2935E+05	1.2540E+01	-	6.1759E+03	3.5099E+04
1.8666E+02	1.6947E+03	6.5208E+01	-	2.2261E+05	3.5932E+00	-	5.7347E+03	4.5733E+04
1.8666E+02	1.6362E+03	1.0789E+02	-	2.1586E+05	1.9058E+01	-	5.2936E+03	1.2517E+05
1.8666E+02	1.5778E+03	3.9397E+01	-	2.0237E+05	2.4998E+00	-	4.8525E+03	2.1587E+05
1.8666E+02	1.5193E+03	5.4159E+01	-	1.9562E+05	2.5004E+01	-	4.4113E+03	4.0100E+05
1.8666E+02	1.4609E+03	6.4504E+01	-	1.8888E+05	1.6298E+00	-	3.9702E+03	4.9074E+05
1.8666E+02	1.4025E+03	9.3236E+01	-	1.8213E+05	3.5375E+00	-	3.5291E+03	5.5485E+05
1.8666E+02	1.3440E+03	1.2951E+02	-	1.7539E+05	1.4415E+01	-	3.0879E+03	6.9568E+05
1.8666E+02	1.2856E+03	2.2711E+02	-	1.6864E+05	1.0605E+01	-	2.6468E+03	7.5056E+05
1.8666E+02	1.2272E+03	1.0878E+02	-	1.6190E+05	1.3998E+00	-	2.2057E+03	7.9137E+05
1.8666E+02	1.1687E+03	2.5650E+02	-	1.4840E+05	2.8171E+01	-	1.7645E+03	6.8942E+05
1.8666E+02	1.1103E+03	3.3825E+02	-	1.4166E+05	2.1024E+01	-	1.3234E+03	7.0727E+05
1.8666E+02	1.0519E+03	6.4452E+02	-	1.3491E+05	5.0046E+00	-	8.8227E+02	1.2501E+06
1.8666E+02	9.9342E+02	5.3938E+02	-	1.2817E+05	1.4064E+02	-	4.4113E+02	3.2478E+06
1.8666E+02	9.3498E+02	3.4066E+02	-	1.2142E+05	5.8214E+01	-	0.0000E+00	6.0884E+06
1.8666E+02	8.7655E+02	2.0627E+03	-	1.1468E+05	9.8389E+02	-	1.9410E+04	1.7360E+00
1.8666E+02	8.1811E+02	1.1978E+03	-	1.0793E+05	6.5213E+02	-	1.8087E+04	5.5625E-02
1.8666E+02	7.5967E+02	4.2992E+03	-	1.0118E+05	9.6740E+02	-	1.7645E+04	5.5610E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.8666E+02	7.0124E+02	1.3814E+04	-	9.4439E+04	1.2226E+03	-	1.6763E+04	5.3640E-01
1.8666E+02	6.4280E+02	2.8802E+04	-	8.7693E+04	4.9968E+03	-	1.6322E+04	9.2025E-02
1.8666E+02	5.8436E+02	4.0121E+04	-	8.0948E+04	3.2358E+03	-	1.5881E+04	1.4765E-01
1.8666E+02	5.2593E+02	1.0991E+05	-	7.4202E+04	7.5774E+03	-	1.5440E+04	1.1125E-01
1.8666E+02	4.6749E+02	1.8212E+05	-	6.7456E+04	7.9833E+03	-	1.4999E+04	3.0149E+00
1.8666E+02	4.0905E+02	4.4531E+05	-	6.0711E+04	2.8152E+04	-	1.4557E+04	5.5625E-02
1.8666E+02	3.5062E+02	1.0380E+06	-	5.3965E+04	4.5526E+04	-	1.4116E+04	1.5063E+01
1.8666E+02	2.9218E+02	2.4770E+06	-	4.7219E+04	1.0404E+05	-	1.3234E+04	1.7500E+00
1.8666E+02	2.3375E+02	5.7046E+06	-	4.0474E+04	2.5156E+05	-	1.2793E+04	1.7500E+00
1.8666E+02	1.7531E+02	1.1595E+07	-	3.3728E+04	7.4908E+05	-	1.2352E+04	5.1682E+00
1.8666E+02	1.1687E+02	1.7582E+07	-	2.6983E+04	1.4323E+06	-	1.1911E+04	3.2928E+00
1.8666E+02	5.8436E+01	2.7847E+07	-	2.0237E+04	2.8179E+06	-	1.1469E+04	1.7916E+00
1.8666E+02	0.0000E+00	6.6549E+07	-	1.3491E+04	4.9828E+06	-	1.1028E+04	3.4164E+00
1.1640E+02	2.9218E+03	1.7500E+00	-	6.7456E+03	7.9854E+06	-	1.0587E+04	1.3998E+00
1.1640E+02	2.6881E+03	1.7500E+00	-	0.0000E+00	1.1533E+07	-	1.0146E+04	1.4340E+00
1.1640E+02	2.4543E+03	1.7360E+00	-	2.9006E+05	6.5105E+00	-	9.7050E+03	1.1463E+02
1.1640E+02	2.2206E+03	5.3056E+00	-	2.6308E+05	1.6804E+00	-	9.2638E+03	6.2505E+00
1.1640E+02	2.1621E+03	5.2500E+00	-	2.5633E+05	8.1909E+00	-	8.8227E+03	1.7248E+01
1.1640E+02	2.0453E+03	2.6209E+01	-	2.4959E+05	2.4169E+01	-	8.3816E+03	1.2396E+01
1.1640E+02	1.9868E+03	9.0312E-01	-	2.4284E+05	3.3608E+00	-	7.9404E+03	1.7275E+02
1.1640E+02	1.8700E+03	6.2500E-01	-	2.3610E+05	1.1209E+01	-	7.4993E+03	2.2123E+03
1.1640E+02	1.8115E+03	1.3077E+01	-	2.2935E+05	8.2605E+00	-	7.0582E+03	3.2157E+02
1.1640E+02	1.7531E+03	4.1772E+01	-	2.1586E+05	4.2748E+00	-	6.6170E+03	3.2355E+03
1.1640E+02	1.6947E+03	3.9341E+01	-	2.0911E+05	1.7589E+01	-	6.1759E+03	1.0922E+04
1.1640E+02	1.6362E+03	1.3243E+01	-	2.0237E+05	4.0743E+01	-	5.7347E+03	2.6642E+03
1.1640E+02	1.5778E+03	3.2493E+01	-	1.9562E+05	1.0062E+01	-	5.2936E+03	2.8115E+04
1.1640E+02	1.5193E+03	2.9580E+01	-	1.8888E+05	1.9833E+01	-	4.8525E+03	1.7225E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.1640E+02	1.4609E+03	5.2732E+01	-	1.8213E+05	1.8700E+01	-	4.4113E+03	7.1710E+04
1.1640E+02	1.4025E+03	8.7822E+01	-	1.7539E+05	5.7424E+00	-	3.9702E+03	1.4432E+05
1.1640E+02	1.3440E+03	1.4389E+02	-	1.6864E+05	3.1484E+00	-	3.5291E+03	2.5790E+05
1.1640E+02	1.2856E+03	2.2354E+02	-	1.6190E+05	1.2134E+00	-	3.0879E+03	2.3795E+05
1.1640E+02	1.2272E+03	3.0026E+02	-	1.5515E+05	1.6873E+00	-	2.6468E+03	2.8124E+05
1.1640E+02	1.1687E+03	2.6638E+02	-	1.4840E+05	4.0055E+01	-	2.2057E+03	3.2722E+05
1.1640E+02	1.1103E+03	2.3752E+02	-	1.4166E+05	1.4552E+02	-	1.7645E+03	4.3993E+05
1.1640E+02	1.0519E+03	2.4844E+02	-	1.3491E+05	3.2179E+02	-	1.3234E+03	4.5043E+05
1.1640E+02	9.9342E+02	5.1536E+02	-	1.2817E+05	1.4383E+02	-	8.8227E+02	6.0611E+05
1.1640E+02	9.3498E+02	6.0594E+02	-	1.2142E+05	1.2695E+02	-	4.4113E+02	1.6212E+06
1.1640E+02	8.7655E+02	7.3578E+02	-	1.1468E+05	6.8351E+02	-	0.0000E+00	3.5750E+06
1.1640E+02	8.1811E+02	2.8489E+03	-	1.0793E+05	9.6986E+03	-	1.9851E+04	5.5625E-02
1.1640E+02	7.5967E+02	3.9378E+03	-	1.0118E+05	7.8616E+03	-	1.8528E+04	5.5625E-02
1.1640E+02	7.0124E+02	7.1759E+03	-	9.4439E+04	8.6638E+03	-	1.7645E+04	1.2500E+00
1.1640E+02	6.4280E+02	1.7669E+04	-	8.7693E+04	6.7959E+03	-	1.3675E+04	1.1125E-01
1.1640E+02	5.8436E+02	2.2322E+04	-	8.0948E+04	3.0847E+04	-	1.3234E+04	5.5625E-02
1.1640E+02	5.2593E+02	5.4764E+04	-	7.4202E+04	1.9676E+04	-	1.2793E+04	1.7500E+00
1.1640E+02	4.6749E+02	1.3768E+05	-	6.7456E+04	3.8098E+04	-	1.2352E+04	5.5625E-02
1.1640E+02	4.0905E+02	3.5765E+05	-	6.0711E+04	2.2558E+04	-	1.1911E+04	2.4862E+00
1.1640E+02	3.5062E+02	8.7161E+05	-	5.3965E+04	7.7346E+04	-	1.1469E+04	2.1760E+00
1.1640E+02	2.9218E+02	2.0837E+06	-	4.7219E+04	1.2496E+05	-	1.1028E+04	8.4750E-01
1.1640E+02	2.3375E+02	3.9390E+06	-	4.0474E+04	2.7858E+05	-	1.0587E+04	2.1672E+00
1.1640E+02	1.7531E+02	6.8744E+06	-	3.3728E+04	8.3913E+05	-	9.2638E+03	3.7599E+00
1.1640E+02	1.1687E+02	1.1319E+07	-	2.6983E+04	1.7309E+06	-	8.3816E+03	1.2729E+01
1.1640E+02	5.8436E+01	1.7936E+07	-	2.0237E+04	3.6920E+06	-	7.9404E+03	7.6769E+01
1.1640E+02	0.0000E+00	5.0243E+07	-	1.3491E+04	5.9935E+06	-	7.4993E+03	1.3205E+02
4.6145E+01	2.7465E+03	3.4304E+00	-	6.7456E+03	9.0963E+06	-	7.0582E+05	3.7686E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6145E+01	2.6881E+03	1.7500E+00	-	0.0000E+00	1.2144E+07	-	6.6170E+03	1.7291E+02
4.6145E+01	2.5712E+03	3.5556E+00	-	2.4959E+05	3.3608E+00	-	6.1759E+03	7.1411E+01
4.6145E+01	2.5128E+03	6.5105E+00	-	2.4284E+05	1.7500E+00	-	5.7347E+03	5.9037E+03
4.6145E+01	2.4543E+03	1.7500E+00	-	2.3610E+05	9.8713E+00	-	5.2936E+03	7.7586E+02
4.6145E+01	2.3959E+03	1.6804E+00	-	2.2261E+05	3.5375E+00	-	4.8525E+03	3.5825E+03
4.6145E+01	2.3375E+03	1.7500E+00	-	2.1586E+05	3.3242E+00	-	4.4113E+03	1.5536E+04
4.6145E+01	2.1037E+03	1.6804E+00	-	2.0911E+05	1.6804E+00	-	3.9702E+03	1.2912E+04
4.6145E+01	1.8115E+03	5.5625E-02	-	2.0237E+05	2.0828E+01	-	3.5291E+03	1.7259E+04
4.6145E+01	1.7531E+03	2.2250E-01	-	1.9562E+05	4.1557E+01	-	3.0879E+03	5.7290E+04
4.6145E+01	1.6947E+03	3.5556E+00	-	1.8888E+05	4.2238E+00	-	2.6468E+03	5.5508E+04
4.6145E+01	1.6362E+03	1.3188E+01	-	1.8213E+05	2.4104E+01	-	2.2057E+03	1.2686E+05
4.6145E+01	1.5778E+03	2.9876E+01	-	1.7539E+05	3.5831E+00	-	1.7645E+03	1.3601E+05
4.6145E+01	1.5193E+03	1.5660E+01	-	1.6864E+05	4.1583E+01	-	1.3234E+03	1.6613E+05
4.6145E+01	1.4609E+03	2.6264E+01	-	1.6190E+05	4.7226E+00	-	8.8227E+02	2.9286E+05
4.6145E+01	1.4025E+03	2.6088E+01	-	1.5515E+05	1.1408E+01	-	4.4113E+02	7.9811E+05
4.6145E+01	1.3440E+03	2.7889E+01	-	1.4840E+05	5.3738E+01	-	0.0000E+00	1.9460E+06
4.6145E+01	1.2856E+03	3.5649E+00	-	1.4166E+05	4.2862E+02	-	2.0292E+04	5.5625E-02
4.6145E+01	1.2272E+03	1.9604E+01	-	1.3491E+05	7.1573E+02	-	1.4116E+04	1.1125E-01
4.6145E+01	1.1687E+03	2.8904E+01	-	1.2817E+05	1.0596E+03	-	1.3675E+04	5.5625E-02
4.6145E+01	1.1103E+03	4.6350E+01	-	1.2142E+05	4.2158E+02	-	1.3234E+04	6.2500E-01
4.6145E+01	1.0519E+03	5.2225E+01	-	1.1468E+05	1.0675E+04	-	1.2793E+04	1.6688E-01
4.6145E+01	9.9342E+02	1.1356E+02	-	1.0793E+05	2.6363E+03	-	1.1911E+04	1.6804E+00
4.6145E+01	9.3498E+02	7.7214E+01	-	1.0118E+05	2.2250E+03	-	1.1469E+04	3.5000E+00
4.6145E+01	8.7655E+02	1.7284E+02	-	9.4439E+04	8.2362E+03	-	1.0587E+04	3.5000E+00
4.6145E+01	8.1811E+02	2.3367E+02	-	8.7693E+04	2.8627E+04	-	1.0146E+04	1.1125E-01
4.6145E+01	7.5967E+02	1.3217E+04	-	8.0948E+04	2.4763E+04	-	8.8227E+03	1.8973E+00
4.6145E+01	7.0124E+02	2.4327E+03	-	7.4202E+04	2.9238E+04	-	7.9404E+05	1.1340E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6145E+01	6.4280E+02	4.3577E+04	-	6.7456E+04	3.7308E+04	-	7.4993E+03	1.1125E-01
4.6145E+01	5.8436E+02	7.9193E+04	-	6.0711E+04	5.9455E+04	-	7.0582E+03	7.1112E+00
4.6145E+01	5.2593E+02	3.2599E+04	-	5.3965E+04	6.3197E+04	-	6.6170E+03	5.5363E+00
4.6145E+01	4.6749E+02	8.2550E+04	-	4.7219E+04	9.9659E+04	-	6.1759E+03	1.1125E-01
4.6145E+01	4.0905E+02	1.2874E+05	-	4.0474E+04	1.7486E+05	-	5.7347E+03	2.7756E+02
4.6145E+01	3.5062E+02	3.3104E+05	-	3.3728E+04	4.8136E+05	-	5.2936E+03	1.4157E+03
4.6145E+01	2.9218E+02	7.6262E+05	-	2.6983E+04	1.5090E+06	-	4.8525E+03	1.3139E+01
4.6145E+01	2.3375E+02	1.6944E+06	-	2.0237E+04	2.9908E+06	-	4.4113E+03	3.7477E+03
4.6145E+01	1.7531E+02	2.9677E+06	-	1.3491E+04	5.2514E+06	-	3.9702E+03	3.4463E+03
4.6145E+01	1.1687E+02	4.8875E+06	-	6.7456E+03	7.9034E+06	-	3.5291E+03	1.4561E+03
4.6145E+01	5.8436E+01	1.1423E+07	-	0.0000E+00	1.3246E+07	-	3.0879E+03	2.2335E+03
4.6145E+01	0.0000E+00	3.5387E+07	-	2.3610E+05	6.5105E+00	-	2.6468E+03	3.2453E+03
-	2.6296E+03	1.7500E+00	-	2.2935E+05	5.2179E+00	-	2.2057E+03	1.5394E+04
-	2.5128E+03	1.7500E+00	-	2.2261E+05	3.5375E+00	-	1.7645E+03	1.7077E+04
-	2.3959E+03	1.6804E+00	-	2.1586E+05	6.2500E-01	-	1.3234E+03	2.2927E+04
-	2.1037E+03	5.5625E-02	-	2.0911E+05	2.9071E+01	-	8.8227E+02	8.9381E+04
-	2.0453E+03	1.1125E-01	-	1.9562E+05	2.5884E+01	-	4.4113E+02	2.3750E+05
-	1.9868E+03	1.6804E+00	-	1.8888E+05	4.2775E+01	-	0.0000E+00	6.9418E+05
-	1.8700E+03	9.5290E+00	-	1.8213E+05	3.7639E+01	-	1.5881E+04	1.1125E-01
-	1.6947E+03	1.9058E+01	-	1.7539E+05	2.5479E+01	-	1.4999E+04	6.2500E-01
-	1.5778E+03	1.1125E-01	-	1.6864E+05	2.6253E+01	-	1.4557E+04	5.5625E-02
-	1.5193E+03	7.3625E-01	-	1.6190E+05	1.2827E+01	-	1.4116E+04	6.2500E-01
-	1.4609E+03	1.6529E+01	-	1.5515E+05	3.1791E+02	-	9.2638E+03	1.1125E-01
-	1.4025E+03	4.2362E+00	-	1.4840E+05	1.4224E+02	-	8.8227E+03	1.1125E-01
-	1.3440E+03	3.7225E+00	-	1.4166E+05	4.7816E+01	-	8.3816E+03	6.0195E-01
-	1.2856E+03	1.4583E+01	-	1.3491E+05	5.6521E+02	-	7.9404E+03	1.1125E-01
-	1.2272E+03	1.9776E+01	-	1.2817E+05	1.0333E+03	-	7.4993E+03	1.1125E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
2.4112E+01	1.1687E+03	5.4710E+01	7.1502E+04	1.2142E+05	7.5606E+02	5.5350E+03	7.0582E+03	3.3608E+00
-			-			-		
2.4112E+01	1.1103E+03	3.0508E+01	7.1502E+04	1.1468E+05	1.2376E+03	5.5350E+03	6.6170E+03	3.6112E+00
-			-			-		
2.4112E+01	1.0519E+03	3.6493E+01	7.1502E+04	1.0793E+05	1.1822E+04	5.5350E+03	6.1759E+03	2.1190E+02
-			-			-		
2.4112E+01	9.9342E+02	4.7989E+01	7.1502E+04	1.0118E+05	1.0072E+04	5.5350E+03	5.7347E+03	6.2410E+00
-			-			-		
2.4112E+01	9.3498E+02	4.9889E+01	7.1502E+04	9.4439E+04	2.4807E+04	5.5350E+03	5.2936E+03	2.6955E+01
-			-			-		
2.4112E+01	8.7655E+02	5.7053E+01	7.1502E+04	8.7693E+04	2.5531E+04	5.5350E+03	4.8525E+03	2.2457E+02
-			-			-		
2.4112E+01	8.1811E+02	6.6148E+03	7.1502E+04	8.0948E+04	2.6592E+04	5.5350E+03	4.4113E+03	8.4066E+01
-			-			-		
2.4112E+01	7.5967E+02	1.9590E+04	7.1502E+04	7.4202E+04	3.7651E+04	5.5350E+03	3.9702E+03	3.3226E+01
-			-			-		
2.4112E+01	7.0124E+02	3.2591E+04	7.1502E+04	6.7456E+04	5.3812E+04	5.5350E+03	3.5291E+03	2.8188E+02
-			-			-		
2.4112E+01	6.4280E+02	2.8251E+04	7.1502E+04	6.0711E+04	9.9652E+04	5.5350E+03	3.0879E+03	4.1560E+01
-			-			-		
2.4112E+01	5.8436E+02	5.8653E+04	7.1502E+04	5.3965E+04	9.9926E+04	5.5350E+03	2.6468E+03	4.6879E+01
-			-			-		
2.4112E+01	5.2593E+02	1.0581E+05	7.1502E+04	4.7219E+04	1.5942E+05	5.5350E+03	2.2057E+03	2.7466E+03
-			-			-		
2.4112E+01	4.6749E+02	7.3928E+04	7.1502E+04	4.0474E+04	1.6974E+05	5.5350E+03	1.7645E+03	2.9533E+03
-			-			-		
2.4112E+01	4.0905E+02	2.1606E+05	7.1502E+04	3.3728E+04	4.4307E+05	5.5350E+03	1.3234E+03	1.1114E+04
-			-			-		
2.4112E+01	3.5062E+02	2.3590E+05	7.1502E+04	2.6983E+04	1.1288E+06	5.5350E+03	8.8227E+02	8.0050E+03
-			-			-		
2.4112E+01	2.9218E+02	2.1845E+05	7.1502E+04	2.0237E+04	2.9442E+06	5.5350E+03	4.4113E+02	5.3091E+04
-			-			-		
2.4112E+01	2.3375E+02	5.9534E+05	7.1502E+04	1.3491E+04	4.9756E+06	5.5350E+03	0.0000E+00	1.9034E+05
-			-			-		
2.4112E+01	1.7531E+02	1.9798E+06	7.1502E+04	6.7456E+03	7.7981E+06	6.0865E+03	1.6763E+04	5.5625E-02
-			-			-		
2.4112E+01	1.1687E+02	4.6373E+06	7.1502E+04	0.0000E+00	1.7990E+07	6.0865E+03	1.4999E+04	6.2500E-01
-			-			-		
2.4112E+01	5.8436E+01	1.1552E+07	7.9038E+04	2.2261E+05	1.6804E+00	6.0865E+03	8.3816E+03	1.1125E-01
-			-			-		
2.4112E+01	0.0000E+00	2.9399E+07	7.9038E+04	2.0911E+05	1.6804E+00	6.0865E+03	7.9404E+03	2.0869E+02
-			-			-		
9.4369E+01	2.0453E+03	5.5625E-02	7.9038E+04	2.0237E+05	3.5375E+00	6.0865E+03	7.4993E+03	1.1826E+01
-			-			-		
9.4369E+01	1.9868E+03	5.5625E-02	7.9038E+04	1.9562E+05	1.8867E+01	6.0865E+03	7.0582E+03	2.5951E+01
-			-			-		
9.4369E+01	1.8115E+03	6.8063E-01	7.9038E+04	1.8888E+05	5.1573E+00	6.0865E+03	6.6170E+03	7.3681E+00
-			-			-		
9.4369E+01	1.7531E+03	1.8056E+00	7.9038E+04	1.8213E+05	1.2644E+01	6.0865E+03	6.1759E+03	3.3780E+00
-			-			-		
9.4369E+01	1.6947E+03	5.9306E+00	7.9038E+04	1.7539E+05	1.2644E+01	6.0865E+03	5.7347E+03	7.1841E+00
-			-			-		
9.4369E+01	1.5778E+03	5.2500E+00	7.9038E+04	1.6190E+05	8.0275E+00	6.0865E+03	5.2936E+03	1.5871E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
9.4369E+01	1.5193E+03	8.8056E+00	7.9038E+04	1.5515E+05	6.9663E+01	6.0865E+03	4.8525E+03	5.2794E+00
-			-			-		
9.4369E+01	1.4609E+03	7.0554E+00	7.9038E+04	1.4840E+05	4.3429E+02	6.0865E+03	4.4113E+03	2.0770E+01
-			-			-		
9.4369E+01	1.4025E+03	5.1664E+00	7.9038E+04	1.4166E+05	3.6767E+02	6.0865E+03	3.9702E+03	8.8406E+00
-			-			-		
9.4369E+01	1.3440E+03	2.4306E+00	7.9038E+04	1.3491E+05	1.2483E+03	6.0865E+03	3.5291E+03	4.3327E+00
-			-			-		
9.4369E+01	1.2856E+03	4.2754E+01	7.9038E+04	1.2817E+05	6.4968E+03	6.0865E+03	3.0879E+03	7.0815E+01
-			-			-		
9.4369E+01	1.2272E+03	2.2634E+01	7.9038E+04	1.2142E+05	3.9643E+03	6.0865E+03	2.6468E+03	8.3528E+01
-			-			-		
9.4369E+01	1.1687E+03	1.6347E+01	7.9038E+04	1.1468E+05	5.0674E+03	6.0865E+03	2.2057E+03	6.0422E+01
-			-			-		
9.4369E+01	1.1103E+03	1.1666E+01	7.9038E+04	1.0793E+05	1.2776E+04	6.0865E+03	1.7645E+03	3.5470E+01
-			-			-		
9.4369E+01	1.0519E+03	4.8043E+01	7.9038E+04	1.0118E+05	1.3090E+04	6.0865E+03	1.3234E+03	4.8047E+01
-			-			-		
9.4369E+01	9.9342E+02	3.5845E+01	7.9038E+04	9.4439E+04	2.5183E+04	6.0865E+03	8.8227E+02	3.7131E+03
-			-			-		
9.4369E+01	9.3498E+02	6.8457E+01	7.9038E+04	8.7693E+04	4.7577E+04	6.0865E+03	4.4113E+02	4.2726E+03
-			-			-		
9.4369E+01	8.7655E+02	4.5607E+01	7.9038E+04	8.0948E+04	7.2887E+04	6.0865E+03	0.0000E+00	3.8036E+04
-			-			-		
9.4369E+01	8.1811E+02	1.4236E+02	7.9038E+04	7.4202E+04	1.0723E+05	6.6380E+03	1.6763E+04	5.5625E-02
-			-			-		
9.4369E+01	7.5967E+02	1.3665E+02	7.9038E+04	6.7456E+04	1.3626E+05	6.6380E+03	1.5440E+04	5.5625E-02
-			-			-		
9.4369E+01	7.0124E+02	1.2960E+02	7.9038E+04	6.0711E+04	1.8674E+05	6.6380E+03	1.4557E+04	1.6804E+00
-			-			-		
9.4369E+01	6.4280E+02	2.3347E+02	7.9038E+04	5.3965E+04	2.8532E+05	6.6380E+03	1.4116E+04	1.1125E-01
-			-			-		
9.4369E+01	5.8436E+02	1.8993E+02	7.9038E+04	4.7219E+04	3.7780E+05	6.6380E+03	6.6170E+03	2.3897E+00
-			-			-		
9.4369E+01	5.2593E+02	2.8552E+02	7.9038E+04	4.0474E+04	5.8077E+05	6.6380E+03	6.1759E+03	5.1682E+00
-			-			-		
9.4369E+01	4.6749E+02	5.2574E+02	7.9038E+04	3.3728E+04	8.2626E+05	6.6380E+03	5.7347E+03	4.7500E+00
-			-			-		
9.4369E+01	4.0905E+02	1.1193E+04	7.9038E+04	2.6983E+04	1.5732E+06	6.6380E+03	5.2936E+03	3.0125E+01
-			-			-		
9.4369E+01	3.5062E+02	3.0081E+03	7.9038E+04	2.0237E+04	3.6001E+06	6.6380E+03	4.4113E+03	1.1899E+01
-			-			-		
9.4369E+01	2.9218E+02	7.6320E+03	7.9038E+04	1.3491E+04	5.5088E+06	6.6380E+03	3.9702E+03	3.2599E+00
-			-			-		
9.4369E+01	2.3375E+02	1.1703E+04	7.9038E+04	6.7456E+03	6.7837E+06	6.6380E+03	3.5291E+03	9.2949E+00
-			-			-		
9.4369E+01	1.7531E+02	3.4287E+04	7.9038E+04	0.0000E+00	1.8708E+07	6.6380E+03	3.0879E+03	2.7619E+01
-			-			-		
9.4369E+01	1.1687E+02	2.2666E+05	8.6574E+04	1.8888E+05	2.4881E+02	6.6380E+03	2.6468E+03	3.5882E+01
-			-			-		
9.4369E+01	5.8436E+01	8.1385E+05	8.6574E+04	1.7539E+05	7.0597E+02	6.6380E+03	2.2057E+03	2.8598E+01
-			-			-		
9.4369E+01	0.0000E+00	3.2233E+06	8.6574E+04	1.6864E+05	3.3139E+02	6.6380E+03	1.7645E+03	2.1370E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
1.6463E+02	2.8049E+03	1.1125E-01	8.6574E+04	1.6190E+05	2.7577E+02	6.6380E+03	1.3234E+03	7.6112E+00
-			-			-		
1.6463E+02	2.0453E+03	3.5000E+00	8.6574E+04	1.5515E+05	3.1815E+02	6.6380E+03	8.8227E+02	1.8808E+01
-			-			-		
1.6463E+02	1.8115E+03	5.2500E+00	8.6574E+04	1.4840E+05	8.2197E+02	6.6380E+03	4.4113E+02	3.6981E+03
-			-			-		
1.6463E+02	1.6362E+03	7.0000E+00	8.6574E+04	1.4166E+05	4.0802E+03	6.6380E+03	0.0000E+00	4.7654E+03
-			-			-		
1.6463E+02	1.5193E+03	1.6804E+00	8.6574E+04	1.3491E+05	7.7899E+02	7.1894E+03	8.3816E+03	3.4720E+00
-			-			-		
1.6463E+02	1.4609E+03	5.8054E+00	8.6574E+04	1.2817E+05	3.0375E+03	7.1894E+03	6.6170E+03	2.1940E+00
-			-			-		
1.6463E+02	1.4025E+03	1.9180E+01	8.6574E+04	1.2142E+05	8.0535E+03	7.1894E+03	6.1759E+03	1.1125E-01
-			-			-		
1.6463E+02	1.3440E+03	1.5472E+01	8.6574E+04	1.1468E+05	1.6201E+04	7.1894E+03	5.2936E+03	1.8405E-01
-			-			-		
1.6463E+02	1.2856E+03	6.9304E+00	8.6574E+04	1.0793E+05	2.3047E+04	7.1894E+03	4.8525E+03	1.2500E+00
-			-			-		
1.6463E+02	1.2272E+03	7.0000E+00	8.6574E+04	1.0118E+05	3.6077E+04	7.1894E+03	4.4113E+03	1.8405E-01
-			-			-		
1.6463E+02	1.1687E+03	6.0499E+01	8.6574E+04	9.4439E+04	6.3172E+04	7.1894E+03	3.9702E+03	1.8519E+00
-			-			-		
1.6463E+02	1.1103E+03	2.2680E+01	8.6574E+04	8.7693E+04	8.4687E+04	7.1894E+03	3.5291E+03	2.3052E+00
-			-			-		
1.6463E+02	1.0519E+03	5.2920E+01	8.6574E+04	8.0948E+04	1.2896E+05	7.1894E+03	3.0879E+03	1.4975E+01
-			-			-		
1.6463E+02	9.9342E+02	2.4291E+01	8.6574E+04	7.4202E+04	2.4898E+05	7.1894E+03	2.6468E+03	1.1125E-01
-			-			-		
1.6463E+02	9.3498E+02	2.4430E+01	8.6574E+04	6.7456E+04	3.2436E+05	7.1894E+03	2.2057E+03	4.6108E+00
-			-			-		
1.6463E+02	8.7655E+02	5.3034E+01	8.6574E+04	6.0711E+04	4.4715E+05	7.1894E+03	1.7645E+03	3.6112E+00
-			-			-		
1.6463E+02	8.1811E+02	6.8582E+01	8.6574E+04	5.3965E+04	7.2075E+05	7.1894E+03	1.3234E+03	1.4020E+01
-			-			-		
1.6463E+02	7.5967E+02	5.7583E+01	8.6574E+04	4.7219E+04	9.2149E+05	7.1894E+03	8.8227E+02	2.8801E+01
-			-			-		
1.6463E+02	7.0124E+02	5.7443E+01	8.6574E+04	4.0474E+04	1.2456E+06	7.1894E+03	4.4113E+02	4.3920E+03
-			-			-		
1.6463E+02	6.4280E+02	5.2123E+01	8.6574E+04	3.3728E+04	1.7254E+06	7.1894E+03	0.0000E+00	6.0783E+02
-			-			-		
1.6463E+02	5.8436E+02	8.1467E+01	8.6574E+04	2.6983E+04	2.3130E+06	7.7409E+03	7.9404E+03	1.1125E-01
-			-			-		
1.6463E+02	5.2593E+02	1.3835E+02	8.6574E+04	2.0237E+04	3.7173E+06	7.7409E+03	7.0582E+03	1.2500E+00
-			-			-		
1.6463E+02	4.6749E+02	1.2969E+02	8.6574E+04	1.3491E+04	4.2193E+06	7.7409E+03	5.7347E+03	3.3608E+00
-			-			-		
1.6463E+02	4.0905E+02	9.2617E+01	8.6574E+04	6.7456E+03	5.5096E+06	7.7409E+03	5.2936E+03	1.0728E+00
-			-			-		
1.6463E+02	3.5062E+02	2.7166E+02	8.6574E+04	0.0000E+00	1.5450E+07	7.7409E+03	4.8525E+03	2.5000E+00
-			-			-		
1.6463E+02	2.9218E+02	4.4378E+03	9.4111E+04	1.9562E+05	7.1936E+02	7.7409E+03	3.9702E+03	1.1125E-01
-			-			-		
1.6463E+02	2.3375E+02	1.3434E+04	9.4111E+04	1.8213E+05	8.5692E+02	7.7409E+03	3.5291E+03	3.5000E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
1.6463E+02	1.7531E+02	2.2124E+04	9.4111E+04	1.7539E+05	8.7230E+02	7.7409E+03	3.0879E+03	1.1125E-01
-			-			-		
1.6463E+02	1.1687E+02	7.8396E+04	9.4111E+04	1.6190E+05	2.7170E+03	7.7409E+03	2.6468E+03	6.9203E+00
-			-			-		
1.6463E+02	5.8436E+01	1.1455E+05	9.4111E+04	1.5515E+05	1.8179E+03	7.7409E+03	2.2057E+03	1.4409E+00
-			-			-		
1.6463E+02	0.0000E+00	4.3494E+05	9.4111E+04	1.4840E+05	1.8552E+03	7.7409E+03	1.7645E+03	1.1583E+01
-			-			-		
2.3488E+02	1.9868E+03	1.7500E+00	9.4111E+04	1.4166E+05	5.2727E+03	7.7409E+03	1.3234E+03	4.3945E+00
-			-			-		
2.3488E+02	1.8700E+03	1.7500E+00	9.4111E+04	1.3491E+05	6.7433E+03	7.7409E+03	8.8227E+02	1.3681E+00
-			-			-		
2.3488E+02	1.6947E+03	5.5625E-02	9.4111E+04	1.2817E+05	1.2440E+03	7.7409E+03	4.4113E+02	5.4897E+01
-			-			-		
2.3488E+02	1.6362E+03	5.1804E+00	9.4111E+04	1.2142E+05	9.3727E+03	7.7409E+03	0.0000E+00	3.2971E+02
-			-			-		
2.3488E+02	1.5778E+03	5.1804E+00	9.4111E+04	1.1468E+05	1.3941E+04	8.2924E+03	5.2936E+03	3.3608E+00
-			-			-		
2.3488E+02	1.5193E+03	3.5000E+00	9.4111E+04	1.0793E+05	2.1034E+04	8.2924E+03	3.9702E+03	1.1125E-01
-			-			-		
2.3488E+02	1.4609E+03	7.0000E+00	9.4111E+04	1.0118E+05	6.1245E+04	8.2924E+03	3.5291E+03	3.5000E+00
-			-			-		
2.3488E+02	1.4025E+03	1.1055E+01	9.4111E+04	9.4439E+04	7.7050E+04	8.2924E+03	3.0879E+03	3.3608E+00
-			-			-		
2.3488E+02	1.3440E+03	9.3750E+00	9.4111E+04	8.7693E+04	1.3252E+05	8.2924E+03	1.7645E+03	2.2250E-01
-			-			-		
2.3488E+02	1.2856E+03	5.1108E+00	9.4111E+04	8.0948E+04	1.8706E+05	8.2924E+03	1.3234E+03	2.9530E-01
-			-			-		
2.3488E+02	1.2272E+03	5.1804E+00	9.4111E+04	7.4202E+04	3.0945E+05	8.2924E+03	4.4113E+02	7.9716E+00
-			-			-		
2.3488E+02	1.1687E+03	1.5472E+01	9.4111E+04	6.7456E+04	4.7689E+05	8.2924E+03	0.0000E+00	3.8503E+01
-			-			-		
2.3488E+02	1.1103E+03	1.3652E+01	9.4111E+04	6.0711E+04	6.7112E+05	8.8439E+03	8.8227E+03	1.1125E-01
-			-			-		
2.3488E+02	1.0519E+03	1.3902E+01	9.4111E+04	5.3965E+04	1.0759E+06	8.8439E+03	7.0582E+03	1.1125E-01
-			-			-		
2.3488E+02	9.9342E+02	2.5902E+01	9.4111E+04	4.7219E+04	1.5876E+06	8.8439E+03	2.6468E+03	4.7500E+00
-			-			-		
2.3488E+02	9.3498E+02	2.5271E+01	9.4111E+04	4.0474E+04	2.1754E+06	8.8439E+03	4.4113E+02	3.1486E+01
-			-			-		
2.3488E+02	8.7655E+02	2.9583E+01	9.4111E+04	3.3728E+04	3.1404E+06	8.8439E+03	0.0000E+00	1.6545E+01
-			-			-		
2.3488E+02	8.1811E+02	1.3582E+01	9.4111E+04	2.6983E+04	3.8146E+06	9.3954E+03	1.3234E+03	1.1125E-01
-			-			-		
2.3488E+02	7.5967E+02	1.1611E+01	9.4111E+04	2.0237E+04	4.4078E+06	9.3954E+03	4.4113E+02	1.6181E+00
-			-			-		
2.3488E+02	7.0124E+02	1.7082E+01	9.4111E+04	1.3491E+04	4.5447E+06	9.3954E+03	0.0000E+00	6.2386E+00
-			-			-		
2.3488E+02	6.4280E+02	1.7444E+01	9.4111E+04	6.7456E+03	4.4147E+06	9.9469E+03	5.7347E+03	1.1125E-01
-			-			-		
2.3488E+02	5.8436E+02	3.2416E+01	9.4111E+04	0.0000E+00	1.3220E+07	9.9469E+03	4.4113E+02	3.3608E+00
-			-			-		
2.3488E+02	5.2593E+02	6.4236E+01	1.0165E+05	1.6864E+05	2.4881E+02	9.9469E+03	0.0000E+00	2.0000E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
2.3488E+02	4.6749E+02	2.5694E+01	1.0165E+05	1.6190E+05	3.2188E+03	1.0498E+04	0.0000E+00	5.3707E+00
-			-			-		
2.3488E+02	4.0905E+02	8.5547E+01	1.0165E+05	1.5515E+05	9.9917E+02	1.1050E+04	4.4113E+02	1.1125E-01
-			-			-		
2.3488E+02	3.5062E+02	3.1887E+01	1.0165E+05	1.4840E+05	2.6008E+03	1.3256E+04	0.0000E+00	1.1125E-01
-			-					
2.3488E+02	2.9218E+02	3.9026E+01	1.0165E+05	1.4166E+05	2.1733E+03			
-			-					
2.3488E+02	2.3375E+02	7.7544E+01	1.0165E+05	1.3491E+05	6.2724E+03			
-			-					
2.3488E+02	1.7531E+02	1.3196E+02	1.0165E+05	1.2817E+05	1.1832E+04			
-			-					
2.3488E+02	1.1687E+02	2.0467E+02	1.0165E+05	1.2142E+05	1.5487E+04			
-			-					
2.3488E+02	5.8436E+01	1.3426E+04	1.0165E+05	1.1468E+05	3.0558E+04			
-			-					
2.3488E+02	0.0000E+00	2.7594E+05	1.0165E+05	1.0793E+05	3.0937E+04			
-			-					
3.0514E+02	2.1621E+03	1.7500E+00	1.0165E+05	1.0118E+05	5.9185E+04			
-			-					
3.0514E+02	1.9868E+03	5.2500E+00	1.0165E+05	9.4439E+04	8.9648E+04			
-			-					
3.0514E+02	1.9284E+03	1.7500E+00	1.0165E+05	8.7693E+04	1.3694E+05			
-			-					
3.0514E+02	1.8700E+03	1.7500E+00	1.0165E+05	8.0948E+04	2.6358E+05			
-			-					
3.0514E+02	1.7531E+03	1.7500E+00	1.0165E+05	7.4202E+04	4.3181E+05			
-			-					
3.0514E+02	1.6362E+03	5.1804E+00	1.0165E+05	6.7456E+04	5.9915E+05			
-			-					
3.0514E+02	1.5778E+03	3.4304E+00	1.0165E+05	6.0711E+04	9.2294E+05			
-			-					
3.0514E+02	1.5193E+03	6.8608E+00	1.0165E+05	5.3965E+04	1.5551E+06			
-			-					
3.0514E+02	1.4609E+03	3.4304E+00	1.0165E+05	4.7219E+04	2.1614E+06			
-			-					
3.0514E+02	1.4025E+03	3.3608E+00	1.0165E+05	4.0474E+04	3.2700E+06			
-			-					
3.0514E+02	1.3440E+03	1.3861E+01	1.0165E+05	3.3728E+04	4.2644E+06			
-			-					
3.0514E+02	1.2856E+03	8.6804E+00	1.0165E+05	2.6983E+04	5.8314E+06			
-			-					
3.0514E+02	1.1687E+03	6.2912E+00	1.0165E+05	2.0237E+04	5.8978E+06			
-			-					
3.0514E+02	1.1103E+03	3.4304E+00	1.0165E+05	1.3491E+04	5.4203E+06			
-			-					
3.0514E+02	1.0519E+03	8.1108E+00	1.0165E+05	6.7456E+03	5.6494E+06			
-			-					
3.0514E+02	9.9342E+02	3.3608E+00	1.0165E+05	0.0000E+00	1.4469E+07			
-			-					
3.0514E+02	9.3498E+02	1.0472E+01	1.0918E+05	1.8213E+05	3.4992E+01			
-			-					
3.0514E+02	8.7655E+02	8.6108E+00	1.0918E+05	1.7539E+05	8.5692E+02			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.0514E+02	8.1811E+02	1.6743E+01	1.0918E+05	1.6864E+05	7.7019E+02			
-			-					
3.0514E+02	7.5967E+02	2.0833E+01	1.0918E+05	1.6190E+05	1.5919E+03			
-			-					
3.0514E+02	7.0124E+02	7.1945E+00	1.0918E+05	1.5515E+05	1.6584E+03			
-			-					
3.0514E+02	6.4280E+02	1.4083E+01	1.0918E+05	1.4840E+05	3.5494E+03			
-			-					
3.0514E+02	5.8436E+02	2.3243E+01	1.0918E+05	1.4166E+05	6.9752E+03			
-			-					
3.0514E+02	5.2593E+02	1.7194E+01	1.0918E+05	1.3491E+05	4.2681E+03			
-			-					
3.0514E+02	4.6749E+02	1.8332E+01	1.0918E+05	1.2817E+05	2.7490E+04			
-			-					
3.0514E+02	4.0905E+02	5.3207E+01	1.0918E+05	1.2142E+05	4.3658E+04			
-			-					
3.0514E+02	3.5062E+02	2.7137E+01	1.0918E+05	1.1468E+05	3.2683E+04			
-			-					
3.0514E+02	2.9218E+02	4.1527E+01	1.0918E+05	1.0793E+05	5.7754E+04			
-			-					
3.0514E+02	2.3375E+02	1.4916E+01	1.0918E+05	1.0118E+05	6.9165E+04			
-			-					
3.0514E+02	1.7531E+02	7.4074E+01	1.0918E+05	9.4439E+04	1.3490E+05			
-			-					
3.0514E+02	1.1687E+02	9.2172E+01	1.0918E+05	8.7693E+04	1.9317E+05			
-			-					
3.0514E+02	5.8436E+01	1.3186E+04	1.0918E+05	8.0948E+04	2.6710E+05			
-			-					
3.0514E+02	0.0000E+00	1.3937E+04	1.0918E+05	7.4202E+04	4.6218E+05			
-			-					
3.7540E+02	1.9868E+03	1.7500E+00	1.0918E+05	6.7456E+04	6.7886E+05			
-			-					
3.7540E+02	1.8700E+03	3.4304E+00	1.0918E+05	6.0711E+04	1.1294E+06			
-			-					
3.7540E+02	1.7531E+03	6.8608E+00	1.0918E+05	5.3965E+04	1.7210E+06			
-			-					
3.7540E+02	1.6362E+03	1.7500E+00	1.0918E+05	4.7219E+04	2.7517E+06			
-			-					
3.7540E+02	1.4609E+03	1.6804E+00	1.0918E+05	4.0474E+04	4.1512E+06			
-			-					
3.7540E+02	1.3440E+03	3.4304E+00	1.0918E+05	3.3728E+04	5.2872E+06			
-			-					
3.7540E+02	1.2856E+03	3.5000E+00	1.0918E+05	2.6983E+04	6.6466E+06			
-			-					
3.7540E+02	1.2272E+03	1.6804E+00	1.0918E+05	2.0237E+04	6.7477E+06			
-			-					
3.7540E+02	1.1687E+03	1.7500E+00	1.0918E+05	1.3491E+04	6.5387E+06			
-			-					
3.7540E+02	9.9342E+02	1.3861E+01	1.0918E+05	6.7456E+03	5.1857E+06			
-			-					
3.7540E+02	9.3498E+02	1.0361E+01	1.0918E+05	0.0000E+00	1.3942E+07			
-			-					
3.7540E+02	8.7655E+02	1.3021E+01	1.1672E+05	1.7539E+05	7.0000E+02			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.7540E+02	8.1811E+02	7.0000E+00	1.1672E+05	1.6190E+05	8.2347E+02			
-			-					
3.7540E+02	7.5967E+02	7.0000E+00	1.1672E+05	1.5515E+05	2.4521E+03			
-			-					
3.7540E+02	7.0124E+02	2.3943E+01	1.1672E+05	1.4840E+05	5.8110E+03			
-			-					
3.7540E+02	6.4280E+02	1.0222E+01	1.1672E+05	1.4166E+05	1.0995E+04			
-			-					
3.7540E+02	5.8436E+02	2.3521E+01	1.1672E+05	1.3491E+05	1.1252E+04			
-			-					
3.7540E+02	5.2593E+02	3.6112E+00	1.1672E+05	1.2817E+05	1.9165E+04			
-			-					
3.7540E+02	4.6749E+02	2.7304E+01	1.1672E+05	1.2142E+05	2.5449E+04			
-			-					
3.7540E+02	4.0905E+02	1.9743E+01	1.1672E+05	1.1468E+05	3.5084E+04			
-			-					
3.7540E+02	3.5062E+02	2.0554E+01	1.1672E+05	1.0793E+05	8.7325E+04			
-			-					
3.7540E+02	2.9218E+02	1.6804E+01	1.1672E+05	1.0118E+05	1.1267E+05			
-			-					
3.7540E+02	2.3375E+02	3.4276E+01	1.1672E+05	9.4439E+04	1.8133E+05			
-			-					
3.7540E+02	1.7531E+02	7.7906E+01	1.1672E+05	8.7693E+04	1.9420E+05			
-			-					
3.7540E+02	1.1687E+02	1.1067E+02	1.1672E+05	8.0948E+04	3.5495E+05			
-			-					
3.7540E+02	5.8436E+01	1.9588E+02	1.1672E+05	7.4202E+04	5.5232E+05			
-			-					
3.7540E+02	0.0000E+00	1.3331E+04	1.1672E+05	6.7456E+04	8.5677E+05			
-			-					
4.4565E+02	1.3440E+03	1.6804E+00	1.1672E+05	6.0711E+04	1.2520E+06			
-			-					
4.4565E+02	9.9342E+02	1.3021E+01	1.1672E+05	5.3965E+04	2.0809E+06			
-			-					
4.4565E+02	9.3498E+02	3.3608E+00	1.1672E+05	4.7219E+04	2.7640E+06			
-			-					
4.4565E+02	7.5967E+02	7.0000E+00	1.1672E+05	4.0474E+04	4.4730E+06			
-			-					
4.4565E+02	7.0124E+02	3.5000E+00	1.1672E+05	3.3728E+04	5.6125E+06			
-			-					
4.4565E+02	6.4280E+02	7.0000E+00	1.1672E+05	2.6983E+04	6.8201E+06			
-			-					
4.4565E+02	5.8436E+02	6.8608E+00	1.1672E+05	2.0237E+04	6.9964E+06			
-			-					
4.4565E+02	5.2593E+02	1.7222E+01	1.1672E+05	1.3491E+04	6.8629E+06			
-			-					
4.4565E+02	4.6749E+02	1.1722E+01	1.1672E+05	6.7456E+03	5.2929E+06			
-			-					
4.4565E+02	4.0905E+02	1.0472E+01	1.1672E+05	0.0000E+00	1.4905E+07			
-			-					
4.4565E+02	3.5062E+02	2.7026E+01	1.2426E+05	1.6190E+05	1.5693E+02			
-			-					
4.4565E+02	2.9218E+02	1.0082E+01	1.2426E+05	1.5515E+05	1.5569E+03			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
4.4565E+02	2.3375E+02	2.7137E+01	1.2426E+05	1.4840E+05	1.4000E+03			
-			-					
4.4565E+02	1.7531E+02	4.4358E+01	1.2426E+05	1.4166E+05	1.9902E+03			
-			-					
4.4565E+02	1.1687E+02	5.5691E+01	1.2426E+05	1.3491E+05	9.7783E+03			
-			-					
4.4565E+02	5.8436E+01	1.1321E+02	1.2426E+05	1.2817E+05	2.1505E+04			
-			-					
4.4565E+02	0.0000E+00	1.9966E+02	1.2426E+05	1.2142E+05	2.9097E+04			
-			-					
5.1591E+02	1.4609E+03	3.5000E+00	1.2426E+05	1.1468E+05	3.3230E+04			
-			-					
5.1591E+02	1.3440E+03	3.5000E+00	1.2426E+05	1.0793E+05	5.9387E+04			
-			-					
5.1591E+02	1.0519E+03	3.5000E+00	1.2426E+05	1.0118E+05	9.4300E+04			
-			-					
5.1591E+02	9.3498E+02	1.3021E+01	1.2426E+05	9.4439E+04	2.0747E+05			
-			-					
5.1591E+02	7.5967E+02	3.3608E+00	1.2426E+05	8.7693E+04	2.0332E+05			
-			-					
5.1591E+02	6.4280E+02	3.3608E+00	1.2426E+05	8.0948E+04	3.7867E+05			
-			-					
5.1591E+02	5.8436E+02	3.5000E+00	1.2426E+05	7.4202E+04	6.0567E+05			
-			-					
5.1591E+02	5.2593E+02	6.7216E+00	1.2426E+05	6.7456E+04	8.1490E+05			
-			-					
5.1591E+02	4.6749E+02	6.7216E+00	1.2426E+05	6.0711E+04	1.4270E+06			
-			-					
5.1591E+02	4.0905E+02	6.7216E+00	1.2426E+05	5.3965E+04	2.1510E+06			
-			-					
5.1591E+02	3.5062E+02	2.3526E+01	1.2426E+05	4.7219E+04	3.0614E+06			
-			-					
5.1591E+02	2.9218E+02	1.1332E+01	1.2426E+05	4.0474E+04	4.5699E+06			
-			-					
5.1591E+02	2.3375E+02	3.3608E+00	1.2426E+05	3.3728E+04	6.0823E+06			
-			-					
5.1591E+02	1.7531E+02	2.3665E+01	1.2426E+05	2.6983E+04	7.3430E+06			
-			-					
5.1591E+02	1.1687E+02	4.4331E+01	1.2426E+05	2.0237E+04	7.1462E+06			
-			-					
5.1591E+02	5.8436E+01	8.9107E+01	1.2426E+05	1.3491E+04	6.1553E+06			
-			-					
5.1591E+02	0.0000E+00	7.4802E+01	1.2426E+05	6.7456E+03	4.8531E+06			
-			-					
5.8617E+02	7.5967E+02	3.3608E+00	1.2426E+05	0.0000E+00	1.4791E+07			
-			-					
5.8617E+02	5.8436E+02	3.3608E+00	1.3179E+05	1.5515E+05	7.0000E+02			
-			-					
5.8617E+02	4.0905E+02	3.3608E+00	1.3179E+05	1.4166E+05	1.5252E+03			
-			-					
5.8617E+02	3.5062E+02	3.5000E+00	1.3179E+05	1.3491E+05	1.7857E+03			
-			-					
5.8617E+02	2.9218E+02	6.7216E+00	1.3179E+05	1.2817E+05	1.5118E+03			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
5.8617E+02	2.3375E+02	2.3526E+01	1.3179E+05	1.2142E+05	2.9958E+04			
-			-					
5.8617E+02	1.7531E+02	2.4054E+01	1.3179E+05	1.1468E+05	1.8478E+04			
-			-					
5.8617E+02	1.1687E+02	2.0638E+01	1.3179E+05	1.0793E+05	6.5747E+04			
-			-					
5.8617E+02	5.8436E+01	4.5776E+01	1.3179E+05	1.0118E+05	8.0792E+04			
-			-					
5.8617E+02	0.0000E+00	6.4319E+01	1.3179E+05	9.4439E+04	1.3517E+05			
-			-					
6.5643E+02	4.6749E+02	3.3608E+00	1.3179E+05	8.7693E+04	2.3409E+05			
-			-					
6.5643E+02	3.5062E+02	6.7216E+00	1.3179E+05	8.0948E+04	4.0938E+05			
-			-					
6.5643E+02	2.3375E+02	1.6804E+01	1.3179E+05	7.4202E+04	6.2088E+05			
-			-					
6.5643E+02	1.7531E+02	1.6804E+01	1.3179E+05	6.7456E+04	1.0605E+06			
-			-					
6.5643E+02	1.1687E+02	1.6915E+01	1.3179E+05	6.0711E+04	1.6158E+06			
-			-					
6.5643E+02	5.8436E+01	4.8846E+01	1.3179E+05	5.3965E+04	2.3177E+06			
-			-					
6.5643E+02	0.0000E+00	4.5998E+01	1.3179E+05	4.7219E+04	3.7077E+06			
-			-					
7.2668E+02	5.8436E+02	3.3608E+00	1.3179E+05	4.0474E+04	5.1402E+06			
-			-					
7.2668E+02	2.3375E+02	3.3608E+00	1.3179E+05	3.3728E+04	6.6030E+06			
-			-					
7.2668E+02	1.7531E+02	1.0082E+01	1.3179E+05	2.6983E+04	7.4771E+06			
-			-					
7.2668E+02	1.1687E+02	1.0082E+01	1.3179E+05	2.0237E+04	7.1755E+06			
-			-					
7.2668E+02	5.8436E+01	2.0443E+01	1.3179E+05	1.3491E+04	6.3845E+06			
-			-					
7.2668E+02	0.0000E+00	1.8945E+01	1.3179E+05	6.7456E+03	5.0917E+06			
-			-					
7.9694E+02	5.2593E+02	3.3608E+00	1.3179E+05	0.0000E+00	1.4321E+07			
-			-					
7.9694E+02	3.5062E+02	3.3608E+00	1.3933E+05	1.2142E+05	2.4695E+02			
-			-					
7.9694E+02	2.9218E+02	3.3608E+00	1.3933E+05	1.1468E+05	9.0070E+03			
-			-					
7.9694E+02	1.7531E+02	3.3608E+00	1.3933E+05	1.0793E+05	9.7499E+03			
-			-					
7.9694E+02	1.1687E+02	3.3608E+00	1.3933E+05	1.0118E+05	4.0758E+04			
-			-					
7.9694E+02	5.8436E+01	1.3443E+01	1.3933E+05	9.4439E+04	6.0376E+04			
-			-					
7.9694E+02	0.0000E+00	3.0526E+01	1.3933E+05	8.7693E+04	9.0008E+04			
-			-					
8.6720E+02	5.8436E+02	3.3608E+00	1.3933E+05	8.0948E+04	2.0346E+05			
-			-					
8.6720E+02	2.3375E+02	3.3608E+00	1.3933E+05	7.4202E+04	3.4928E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
8.6720E+02	1.7531E+02	6.7216E+00	1.3933E+05	6.7456E+04	6.5703E+05			
-			-					
8.6720E+02	1.1687E+02	3.3608E+00	1.3933E+05	6.0711E+04	1.1378E+06			
-			-					
8.6720E+02	5.8436E+01	6.8608E+00	1.3933E+05	5.3965E+04	1.7461E+06			
-			-					
8.6720E+02	0.0000E+00	1.0500E+01	1.3933E+05	4.7219E+04	2.7964E+06			
-			-					
9.3745E+02	3.5062E+02	3.3608E+00	1.3933E+05	4.0474E+04	3.8230E+06			
-			-					
9.3745E+02	2.3375E+02	6.7216E+00	1.3933E+05	3.3728E+04	5.4046E+06			
-			-					
9.3745E+02	1.7531E+02	6.7216E+00	1.3933E+05	2.6983E+04	6.5385E+06			
-			-					
9.3745E+02	1.1687E+02	6.7216E+00	1.3933E+05	2.0237E+04	6.8977E+06			
-			-					
9.3745E+02	5.8436E+01	3.3608E+00	1.3933E+05	1.3491E+04	6.1350E+06			
-			-					
9.3745E+02	0.0000E+00	6.8608E+00	1.3933E+05	6.7456E+03	4.9629E+06			
-			-					
1.0077E+03	1.1687E+02	3.3608E+00	1.3933E+05	0.0000E+00	1.3335E+07			
-			-					
1.0077E+03	5.8436E+01	3.3608E+00	1.4686E+05	1.1468E+05	1.2516E+02			
-			-					
1.0077E+03	0.0000E+00	3.3608E+00	1.4686E+05	1.0793E+05	7.0000E+02			
-			-					
1.0780E+03	0.0000E+00	3.3608E+00	1.4686E+05	1.0118E+05	4.0280E+03			
			-					
			1.4686E+05	9.4439E+04	2.6967E+03			
			-					
			1.4686E+05	8.7693E+04	2.0694E+04			
			-					
			1.4686E+05	8.0948E+04	2.8836E+04			
			-					
			1.4686E+05	7.4202E+04	8.1058E+04			
			-					
			1.4686E+05	6.7456E+04	9.5684E+04			
			-					
			1.4686E+05	6.0711E+04	3.2896E+05			
			-					
			1.4686E+05	5.3965E+04	7.9959E+05			
			-					
			1.4686E+05	4.7219E+04	1.0663E+06			
			-					
			1.4686E+05	4.0474E+04	2.0596E+06			
			-					
			1.4686E+05	3.3728E+04	2.7433E+06			
			-					
			1.4686E+05	2.6983E+04	3.5156E+06			
			-					
			1.4686E+05	2.0237E+04	4.3206E+06			
			-					
			1.4686E+05	1.3491E+04	3.7072E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			-					
			1.4686E+05	6.7456E+03	3.2164E+06			
			-					
			1.4686E+05	0.0000E+00	9.2856E+06			
			-					
			1.5440E+05	7.4202E+04	1.1790E+04			
			-					
			1.5440E+05	6.7456E+04	4.1260E+04			
			-					
			1.5440E+05	6.0711E+04	7.2653E+04			
			-					
			1.5440E+05	5.3965E+04	1.0601E+05			
			-					
			1.5440E+05	4.7219E+04	3.0342E+05			
			-					
			1.5440E+05	4.0474E+04	5.9309E+05			
			-					
			1.5440E+05	3.3728E+04	9.8683E+05			
			-					
			1.5440E+05	2.6983E+04	1.3013E+06			
			-					
			1.5440E+05	2.0237E+04	1.5365E+06			
			-					
			1.5440E+05	1.3491E+04	1.3861E+06			
			-					
			1.5440E+05	6.7456E+03	1.1815E+06			
			-					
			1.5440E+05	0.0000E+00	3.9046E+06			
			-					
			1.6194E+05	6.7456E+04	6.9983E+01			
			-					
			1.6194E+05	6.0711E+04	3.3608E+00			
			-					
			1.6194E+05	5.3965E+04	1.5747E+04			
			-					
			1.6194E+05	4.7219E+04	8.9984E+03			
			-					
			1.6194E+05	4.0474E+04	4.9939E+04			
			-					
			1.6194E+05	3.3728E+04	6.4325E+04			
			-					
			1.6194E+05	2.6983E+04	1.4991E+05			
			-					
			1.6194E+05	2.0237E+04	1.5028E+05			
			-					
			1.6194E+05	1.3491E+04	2.1644E+05			
			-					
			1.6194E+05	6.7456E+03	1.7923E+05			
			-					
			1.6194E+05	0.0000E+00	1.0194E+06			
			-					
			1.6947E+05	6.0711E+04	3.3608E+00			
			-					
			1.6947E+05	2.6983E+04	1.3876E+04			



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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			- 1.6947E+05	2.0237E+04	1.3443E+01			
			- 1.6947E+05	1.3491E+04	1.0082E+01			
			- 1.6947E+05	6.7456E+03	6.9378E+03			
			- 1.6947E+05	0.0000E+00	1.5043E+05			
			- 1.7701E+05	6.7456E+03	3.3608E+00			
			- 1.7701E+05	0.0000E+00	2.7754E+04			
			- 1.8455E+05	0.0000E+00	3.1385E+02			

Table 5-14 [4] Markov Matrix

Appendix G. Markov matrices – issued from [5]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [5]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.6236E+03	0.0000E+00	5.5986E+01	1.4812E+05	1.3430E+04	2.6717E+00	8.9752E+03	0.0000E+00	2.6717E+00
1.5545E+03	0.0000E+00	6.5647E+01	1.4812E+05	0.0000E+00	2.6717E+00	7.7085E+03	1.5887E+03	9.5547E+00
1.4853E+03	5.6153E+01	1.6829E+02	1.3208E+05	0.0000E+00	5.3434E+00	7.7085E+03	0.0000E+00	1.2500E+00
1.4853E+03	0.0000E+00	4.8100E+03	1.2406E+05	1.3430E+04	2.6717E+00	7.0752E+03	4.7661E+03	2.6717E+00
1.4162E+03	5.6153E+01	2.1748E+02	1.2406E+05	6.7149E+03	8.0151E+00	7.0752E+03	1.0591E+03	1.0434E+02
1.4162E+03	0.0000E+00	1.1012E+04	1.2406E+05	0.0000E+00	2.6717E+00	7.0752E+03	5.2957E+02	3.5000E+00
1.3470E+03	2.2461E+02	1.2593E+00	1.1604E+05	2.0145E+04	2.6717E+00	7.0752E+03	0.0000E+00	1.2353E+03
1.3470E+03	1.1231E+02	1.5844E+02	1.1604E+05	6.7149E+03	5.4496E+00	6.4418E+03	3.7070E+03	2.6717E+00
1.3470E+03	5.6153E+01	7.1253E+03	1.1604E+05	0.0000E+00	1.1515E+01	6.4418E+03	2.1183E+03	3.5000E+00
1.3470E+03	0.0000E+00	2.4613E+04	1.0802E+05	6.7149E+03	8.1214E+00	6.4418E+03	1.0591E+03	1.0625E-01
1.2778E+03	1.6846E+02	2.0841E+03	1.0802E+05	0.0000E+00	2.2308E+01	6.4418E+03	5.2957E+02	3.5000E+00
1.2778E+03	1.1231E+02	1.6715E+02	9.9995E+04	3.3575E+04	3.5000E+00	6.4418E+03	0.0000E+00	1.3018E+02
1.2778E+03	5.6153E+01	1.6312E+04	9.9995E+04	2.6860E+04	2.6717E+00	5.8084E+03	6.3549E+03	8.5826E-01
1.2778E+03	0.0000E+00	1.5179E+05	9.9995E+04	6.7149E+03	1.4187E+01	5.8084E+03	4.2366E+03	2.6717E+00
1.2087E+03	5.6153E+02	7.9220E+01	9.9995E+04	0.0000E+00	3.7429E+01	5.8084E+03	3.1774E+03	3.5000E+00
1.2087E+03	4.4922E+02	1.2299E+01	9.1975E+04	4.7004E+04	2.6717E+00	5.8084E+03	1.5887E+03	3.8003E+01
1.2087E+03	2.8077E+02	8.6510E+02	9.1975E+04	4.0289E+04	3.5000E+00	5.8084E+03	1.0591E+03	1.3383E+01
1.2087E+03	1.6846E+02	3.2519E+03	9.1975E+04	2.6860E+04	6.1717E+00	5.8084E+03	5.2957E+02	4.9357E+02
1.2087E+03	1.1231E+02	1.0549E+04	9.1975E+04	2.0145E+04	3.5000E+00	5.8084E+03	0.0000E+00	2.4233E+04
1.2087E+03	5.6153E+01	8.6939E+04	9.1975E+04	1.3430E+04	2.6717E+00	5.1751E+03	5.2957E+03	3.5300E+00
1.2087E+03	0.0000E+00	4.2468E+05	9.1975E+04	6.7149E+03	2.6717E+00	5.1751E+03	4.2366E+03	2.6717E+00
1.1395E+03	4.4922E+02	1.2299E+01	9.1975E+04	0.0000E+00	4.0823E+01	5.1751E+03	3.1774E+03	8.5826E-01
1.1395E+03	3.9307E+02	1.4970E+01	8.3954E+04	8.0579E+04	1.2500E+00	5.1751E+03	2.6479E+03	1.0909E+02
1.1395E+03	2.8077E+02	1.3415E+02	8.3954E+04	4.7004E+04	7.0000E+00	5.1751E+03	2.1183E+03	4.3450E+01
1.1395E+03	1.6846E+02	8.1806E+03	8.3954E+04	4.0289E+04	3.5000E+00	5.1751E+03	1.5887E+03	1.1051E+02
1.1395E+03	1.1231E+02	3.1962E+04	8.3954E+04	2.6860E+04	3.5000E+00	5.1751E+03	1.0591E+03	1.2173E+03
1.1395E+03	5.6153E+01	4.2477E+05	8.3954E+04	2.0145E+04	2.9760E+01	5.1751E+03	5.2957E+02	2.5762E+04
1.1395E+03	0.0000E+00	1.3614E+06	8.3954E+04	1.3430E+04	8.2500E+00	5.1751E+03	0.0000E+00	8.3386E+04
1.0704E+03	1.1792E+03	3.0568E+02	8.3954E+04	6.7149E+03	2.5728E+01	4.5417E+03	6.3549E+03	2.6870E+02
1.0704E+03	8.9845E+02	5.5986E+01	8.3954E+04	0.0000E+00	6.7425E+01	4.5417E+03	5.8253E+03	1.0625E-01
1.0704E+03	7.2999E+02	2.6717E+00	7.5933E+04	2.0816E+05	1.3359E+00	4.5417E+03	5.2957E+03	1.9512E+01
1.0704E+03	5.6153E+02	2.8665E+00	7.5933E+04	6.7149E+04	3.5000E+00	4.5417E+03	4.7661E+03	3.0061E+01
1.0704E+03	4.4922E+02	5.3434E+00	7.5933E+04	4.0289E+04	1.2500E+00	4.5417E+03	4.2366E+03	1.4874E+01
1.0704E+03	3.3692E+02	2.2345E+03	7.5933E+04	3.3575E+04	7.0000E+00	4.5417E+03	3.7070E+03	9.128E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0704E+03	2.8077E+02	6.2749E+02	7.5933E+04	2.0145E+04	3.3788E+01	4.5417E+03	3.1774E+03	5.7354E+02
1.0704E+03	2.2461E+02	4.0568E+03	7.5933E+04	1.3430E+04	2.1000E+01	4.5417E+03	2.6479E+03	3.5000E+00
1.0704E+03	1.6846E+02	4.1371E+04	7.5933E+04	6.7149E+03	4.1275E+01	4.5417E+03	2.1183E+03	4.6759E+03
1.0704E+03	1.1231E+02	1.7108E+05	7.5933E+04	0.0000E+00	7.2981E+01	4.5417E+03	1.5887E+03	3.6067E+03
1.0704E+03	5.6153E+01	1.1420E+06	6.7913E+04	2.0816E+05	1.3359E+00	4.5417E+03	1.0591E+03	3.1109E+04
1.0704E+03	0.0000E+00	3.4467E+06	6.7913E+04	1.0072E+05	2.6717E+00	4.5417E+03	5.2957E+02	1.9335E+05
1.0012E+03	2.1338E+03	1.5844E+02	6.7913E+04	5.3719E+04	3.5000E+00	4.5417E+03	0.0000E+00	5.8019E+05
1.0012E+03	1.8531E+03	7.9220E+01	6.7913E+04	4.0289E+04	2.6717E+00	3.9084E+03	1.2710E+04	1.3359E+00
1.0012E+03	1.3477E+03	6.1137E+02	6.7913E+04	3.3575E+04	1.1667E+01	3.9084E+03	1.1121E+04	1.0625E-01
1.0012E+03	1.2354E+03	1.5844E+02	6.7913E+04	2.6860E+04	8.3562E+00	3.9084E+03	6.8844E+03	5.4496E+00
1.0012E+03	9.5460E+02	2.7783E+02	6.7913E+04	2.0145E+04	1.5672E+01	3.9084E+03	6.3549E+03	2.1250E-01
1.0012E+03	8.9845E+02	1.4998E+03	6.7913E+04	1.3430E+04	1.3172E+01	3.9084E+03	5.2957E+03	3.2896E+00
1.0012E+03	8.4230E+02	6.1271E+02	6.7913E+04	6.7149E+03	2.2121E+01	3.9084E+03	4.7661E+03	3.4267E+03
1.0012E+03	7.8614E+02	4.4598E+03	6.7913E+04	0.0000E+00	7.4257E+01	3.9084E+03	4.2366E+03	6.5105E+02
1.0012E+03	7.2999E+02	4.0290E+03	5.9892E+04	1.7459E+05	2.6717E+00	3.9084E+03	3.7070E+03	1.9167E+04
1.0012E+03	6.7384E+02	7.7552E+03	5.9892E+04	1.6787E+05	1.3359E+00	3.9084E+03	3.1774E+03	6.5498E+04
1.0012E+03	6.1768E+02	9.7983E+03	5.9892E+04	1.6116E+05	1.3359E+00	3.9084E+03	2.6479E+03	1.0488E+05
1.0012E+03	5.6153E+02	9.6722E+03	5.9892E+04	1.4773E+05	1.3359E+00	3.9084E+03	2.1183E+03	1.1141E+05
1.0012E+03	5.0538E+02	2.0157E+04	5.9892E+04	7.3864E+04	2.6717E+00	3.9084E+03	1.5887E+03	1.4780E+05
1.0012E+03	4.4922E+02	2.0642E+03	5.9892E+04	4.7004E+04	3.5000E+00	3.9084E+03	1.0591E+03	1.8336E+05
1.0012E+03	3.9307E+02	3.2815E+03	5.9892E+04	4.0289E+04	7.0000E+00	3.9084E+03	5.2957E+02	6.5614E+05
1.0012E+03	3.3692E+02	1.3398E+04	5.9892E+04	3.3575E+04	1.2278E+01	3.9084E+03	0.0000E+00	1.9940E+06
1.0012E+03	2.8077E+02	3.8611E+04	5.9892E+04	2.6860E+04	2.0172E+01	3.2750E+03	1.4298E+04	6.2500E-01
1.0012E+03	2.2461E+02	3.8990E+04	5.9892E+04	2.0145E+04	1.3172E+01	3.2750E+03	1.1121E+04	1.3359E+00
1.0012E+03	1.6846E+02	1.2280E+05	5.9892E+04	1.3430E+04	2.5538E+01	3.2750E+03	1.0591E+04	1.3359E+00
1.0012E+03	1.1231E+02	7.6454E+05	5.9892E+04	6.7149E+03	2.8586E+01	3.2750E+03	7.9436E+03	2.7780E+00
1.0012E+03	5.6153E+01	3.5340E+06	5.9892E+04	0.0000E+00	6.2421E+01	3.2750E+03	7.4140E+03	3.0250E+02
1.0012E+03	0.0000E+00	7.6700E+06	5.1871E+04	1.7459E+05	1.3359E+00	3.2750E+03	6.8844E+03	2.1250E-01
9.3207E+02	1.7969E+03	1.0956E+03	5.1871E+04	1.6116E+05	1.3359E+00	3.2750E+03	6.3549E+03	1.0147E+03
9.3207E+02	1.7407E+03	1.0797E+03	5.1871E+04	1.5444E+05	3.5000E+00	3.2750E+03	5.8253E+03	6.4934E+03
9.3207E+02	1.6846E+03	5.5986E+01	5.1871E+04	1.4773E+05	1.7500E+00	3.2750E+03	5.2957E+03	1.9359E+04
9.3207E+02	1.6284E+03	1.5844E+02	5.1871E+04	1.4101E+05	5.2500E+00	3.2750E+03	4.7661E+03	6.9029E+04
9.3207E+02	1.5723E+03	2.0009E+03	5.1871E+04	1.3430E+05	1.3359E+00	3.2750E+03	4.2366E+03	1.2320E+05
9.3207E+02	1.5161E+03	2.4510E+03	5.1871E+04	1.2758E+05	1.7500E+00	3.2750E+03	3.7070E+03	2.2270E+05
9.3207E+02	1.4600E+03	8.6510E+02	5.1871E+04	1.1415E+05	1.7500E+00	3.2750E+03	3.1774E+03	4.6842E+05
9.3207E+02	1.4038E+03	4.0107E+03	5.1871E+04	1.0072E+05	2.6717E+00	3.2750E+03	2.6479E+03	4.7140E+05
9.3207E+02	1.3477E+03	1.3115E+03	5.1871E+04	9.4009E+04	2.6717E+00	3.2750E+03	2.1183E+03	1.7534E+05
9.3207E+02	1.2915E+03	5.7837E+03	5.1871E+04	6.7149E+04	2.6717E+00	3.2750E+03	1.5887E+03	4.4957E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.3207E+02	1.2354E+03	3.1043E+03	5.1871E+04	6.0434E+04	1.3563E+00	3.2750E+03	1.0591E+03	7.6532E+05
9.3207E+02	1.1792E+03	6.7806E+03	5.1871E+04	5.3719E+04	6.2779E+00	3.2750E+03	5.2957E+02	2.1347E+06
9.3207E+02	1.1231E+03	9.2476E+03	5.1871E+04	4.7004E+04	7.0000E+00	3.2750E+03	0.0000E+00	4.0900E+06
9.3207E+02	1.0669E+03	1.2634E+04	5.1871E+04	4.0289E+04	7.0000E+00	2.6416E+03	1.4828E+04	5.3125E-02
9.3207E+02	1.0108E+03	1.7769E+04	5.1871E+04	3.3575E+04	1.1750E+01	2.6416E+03	1.4298E+04	6.2500E-01
9.3207E+02	9.5460E+02	4.4007E+04	5.1871E+04	2.6860E+04	2.5343E+01	2.6416E+03	1.1651E+04	4.8358E+00
9.3207E+02	8.9845E+02	3.9549E+04	5.1871E+04	2.0145E+04	3.4571E+01	2.6416E+03	1.1121E+04	1.7500E+00
9.3207E+02	8.4230E+02	5.7204E+04	5.1871E+04	1.3430E+04	3.1750E+01	2.6416E+03	1.0591E+04	1.3359E+00
9.3207E+02	7.8614E+02	9.5201E+04	5.1871E+04	6.7149E+03	4.1993E+01	2.6416E+03	9.0027E+03	1.8563E+00
9.3207E+02	7.2999E+02	1.4866E+05	5.1871E+04	0.0000E+00	1.0445E+04	2.6416E+03	8.4731E+03	2.6347E+01
9.3207E+02	6.7384E+02	1.6955E+05	4.3851E+04	1.8130E+05	6.2500E-01	2.6416E+03	7.9436E+03	6.1634E+03
9.3207E+02	6.1768E+02	2.2003E+05	4.3851E+04	1.6116E+05	3.5000E+00	2.6416E+03	7.4140E+03	4.4377E+03
9.3207E+02	5.6153E+02	2.4623E+05	4.3851E+04	1.4773E+05	5.7576E+00	2.6416E+03	6.8844E+03	1.8670E+04
9.3207E+02	5.0538E+02	3.4042E+05	4.3851E+04	1.4101E+05	7.5075E+00	2.6416E+03	6.3549E+03	6.5916E+04
9.3207E+02	4.4922E+02	3.6045E+05	4.3851E+04	1.3430E+05	3.0859E+00	2.6416E+03	5.8253E+03	8.7652E+04
9.3207E+02	3.9307E+02	3.8531E+05	4.3851E+04	1.2758E+05	7.9217E+00	2.6416E+03	5.2957E+03	2.6565E+05
9.3207E+02	3.3692E+02	3.9386E+05	4.3851E+04	1.2087E+05	6.5858E+00	2.6416E+03	4.7661E+03	3.2925E+05
9.3207E+02	2.8077E+02	3.4089E+05	4.3851E+04	1.1415E+05	1.7500E+00	2.6416E+03	4.2366E+03	5.7524E+05
9.3207E+02	2.2461E+02	4.7418E+05	4.3851E+04	9.4009E+04	2.6717E+00	2.6416E+03	3.7070E+03	8.1022E+05
9.3207E+02	1.6846E+02	7.9541E+05	4.3851E+04	8.0579E+04	2.6717E+00	2.6416E+03	3.1774E+03	9.4806E+05
9.3207E+02	1.1231E+02	2.5733E+06	4.3851E+04	6.7149E+04	9.6717E+00	2.6416E+03	2.6479E+03	1.0520E+06
9.3207E+02	5.6153E+01	8.2990E+06	4.3851E+04	6.0434E+04	4.8562E+00	2.6416E+03	2.1183E+03	1.2689E+06
9.3207E+02	0.0000E+00	1.3011E+07	4.3851E+04	5.3719E+04	9.7779E+00	2.6416E+03	1.5887E+03	1.1336E+06
8.6291E+02	2.0777E+03	7.9220E+01	4.3851E+04	4.7004E+04	6.1717E+00	2.6416E+03	1.0591E+03	1.6580E+06
8.6291E+02	2.0215E+03	3.0568E+02	4.3851E+04	4.0289E+04	1.2556E+01	2.6416E+03	5.2957E+02	3.9713E+06
8.6291E+02	1.9654E+03	7.9220E+01	4.3851E+04	3.3575E+04	1.0093E+01	2.6416E+03	0.0000E+00	8.1727E+06
8.6291E+02	1.9092E+03	7.7382E+02	4.3851E+04	2.6860E+04	2.9778E+01	2.0083E+03	1.8535E+04	5.3125E-02
8.6291E+02	1.8531E+03	4.7950E+03	4.3851E+04	2.0145E+04	5.0228E+01	2.0083E+03	1.5887E+04	5.3125E-02
8.6291E+02	1.7969E+03	2.7324E+03	4.3851E+04	1.3430E+04	1.3038E+02	2.0083E+03	1.4298E+04	5.3125E-02
8.6291E+02	1.7407E+03	1.5883E+03	4.3851E+04	6.7149E+03	9.6521E+01	2.0083E+03	1.2710E+04	1.7500E+00
8.6291E+02	1.6846E+03	4.4067E+03	4.3851E+04	0.0000E+00	1.0661E+04	2.0083E+03	1.1651E+04	5.8850E-01
8.6291E+02	1.6284E+03	6.2038E+03	3.5830E+04	2.0145E+05	1.3359E+00	2.0083E+03	1.1121E+04	9.8777E+02
8.6291E+02	1.5723E+03	4.2312E+03	3.5830E+04	1.6787E+05	5.3125E-02	2.0083E+03	1.0591E+04	3.5180E+02
8.6291E+02	1.5161E+03	1.1030E+04	3.5830E+04	1.6116E+05	1.3890E+00	2.0083E+03	1.0062E+04	3.1075E+03
8.6291E+02	1.4600E+03	1.0970E+04	3.5830E+04	1.5444E+05	5.2500E+00	2.0083E+03	9.5323E+03	3.1043E+03
8.6291E+02	1.4038E+03	1.0892E+04	3.5830E+04	1.4773E+05	3.5000E+00	2.0083E+03	9.0027E+03	2.5595E+02
8.6291E+02	1.3477E+03	3.1581E+04	3.5830E+04	1.4101E+05	9.2575E+00	2.0083E+03	8.4731E+03	1.8388E+04
8.6291E+02	1.2915E+03	2.6620E+04	3.5830E+04	1.3430E+05	7.9217E+00	2.0083E+03	7.9436E+03	2.0150E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.6291E+02	1.2354E+03	5.2807E+04	3.5830E+04	1.2758E+05	5.2500E+00	2.0083E+03	7.4140E+03	4.7213E+04
8.6291E+02	1.1792E+03	7.2122E+04	3.5830E+04	1.1415E+05	8.4292E+00	2.0083E+03	6.8844E+03	1.3113E+05
8.6291E+02	1.1231E+03	1.0965E+05	3.5830E+04	1.0744E+05	3.5000E+00	2.0083E+03	6.3549E+03	2.1309E+05
8.6291E+02	1.0669E+03	1.7762E+05	3.5830E+04	1.0072E+05	2.6717E+00	2.0083E+03	5.8253E+03	4.0857E+05
8.6291E+02	1.0108E+03	1.9354E+05	3.5830E+04	9.4009E+04	1.7500E+00	2.0083E+03	5.2957E+03	5.8806E+05
8.6291E+02	9.5460E+02	3.2012E+05	3.5830E+04	8.0579E+04	6.1717E+00	2.0083E+03	4.7661E+03	8.1213E+05
8.6291E+02	8.9845E+02	4.3488E+05	3.5830E+04	7.3864E+04	2.6717E+00	2.0083E+03	4.2366E+03	1.0285E+06
8.6291E+02	8.4230E+02	6.1947E+05	3.5830E+04	6.7149E+04	2.2246E+01	2.0083E+03	3.7070E+03	1.5527E+06
8.6291E+02	7.8614E+02	8.3098E+05	3.5830E+04	6.0434E+04	1.0093E+01	2.0083E+03	3.1774E+03	1.7230E+06
8.6291E+02	7.2999E+02	1.1176E+06	3.5830E+04	5.3719E+04	6.9622E+01	2.0083E+03	2.6479E+03	2.1299E+06
8.6291E+02	6.7384E+02	1.4563E+06	3.5830E+04	4.7004E+04	2.7089E+01	2.0083E+03	2.1183E+03	1.8703E+06
8.6291E+02	6.1768E+02	1.7976E+06	3.5830E+04	4.0289E+04	5.3024E+01	2.0083E+03	1.5887E+03	2.2094E+06
8.6291E+02	5.6153E+02	2.3368E+06	3.5830E+04	3.3575E+04	3.9339E+01	2.0083E+03	1.0591E+03	3.1268E+06
8.6291E+02	5.0538E+02	2.6187E+06	3.5830E+04	2.6860E+04	6.5239E+01	2.0083E+03	5.2957E+02	6.9182E+06
8.6291E+02	4.4922E+02	2.7829E+06	3.5830E+04	2.0145E+04	1.8270E+02	2.0083E+03	0.0000E+00	1.4649E+07
8.6291E+02	3.9307E+02	2.9321E+06	3.5830E+04	1.3430E+04	1.3503E+02	1.3749E+03	1.7476E+04	1.3634E+01
8.6291E+02	3.3692E+02	2.9692E+06	3.5830E+04	6.7149E+03	2.7541E+04	1.3749E+03	1.5887E+04	1.0625E-01
8.6291E+02	2.8077E+02	2.4691E+06	3.5830E+04	0.0000E+00	7.3285E+04	1.3749E+03	1.5358E+04	1.8712E+00
8.6291E+02	2.2461E+02	2.3708E+06	2.7809E+04	1.7459E+05	1.7500E+00	1.3749E+03	1.4298E+04	1.9606E+01
8.6291E+02	1.6846E+02	2.8632E+06	2.7809E+04	1.6787E+05	1.7500E+00	1.3749E+03	1.3769E+04	1.3309E+01
8.6291E+02	1.1231E+02	5.8618E+06	2.7809E+04	1.6116E+05	1.3359E+00	1.3749E+03	1.3239E+04	1.3031E+00
8.6291E+02	5.6153E+01	1.4697E+07	2.7809E+04	1.5444E+05	6.2500E-01	1.3749E+03	1.2710E+04	2.8235E+02
8.6291E+02	0.0000E+00	2.0310E+07	2.7809E+04	1.4773E+05	3.7640E+00	1.3749E+03	1.2180E+04	1.0706E+02
7.9376E+02	2.3023E+03	4.8174E+02	2.7809E+04	1.4101E+05	3.7640E+00	1.3749E+03	1.1651E+04	3.1111E+01
7.9376E+02	2.1900E+03	2.7993E+01	2.7809E+04	1.3430E+05	6.1717E+00	1.3749E+03	1.1121E+04	2.8095E+02
7.9376E+02	2.0777E+03	1.4015E+02	2.7809E+04	1.2758E+05	1.8031E+00	1.3749E+03	1.0591E+04	1.3039E+03
7.9376E+02	2.0215E+03	6.4018E+02	2.7809E+04	1.2087E+05	3.0859E+00	1.3749E+03	1.0062E+04	4.9848E+03
7.9376E+02	1.9654E+03	2.5541E+02	2.7809E+04	1.1415E+05	3.5000E+00	1.3749E+03	9.5323E+03	8.4198E+03
7.9376E+02	1.9092E+03	1.3642E+03	2.7809E+04	1.0744E+05	9.3730E+00	1.3749E+03	9.0027E+03	1.6237E+04
7.9376E+02	1.8531E+03	5.2844E+03	2.7809E+04	1.0072E+05	1.4209E+01	1.3749E+03	8.4731E+03	4.4914E+04
7.9376E+02	1.7969E+03	4.9642E+03	2.7809E+04	9.4009E+04	1.5959E+01	1.3749E+03	7.9436E+03	5.7315E+04
7.9376E+02	1.7407E+03	7.6857E+03	2.7809E+04	8.7294E+04	4.5279E+00	1.3749E+03	7.4140E+03	1.9528E+05
7.9376E+02	1.6846E+03	1.2178E+04	2.7809E+04	8.0579E+04	3.0168E+01	1.3749E+03	6.8844E+03	2.7718E+05
7.9376E+02	1.6284E+03	2.1846E+04	2.7809E+04	7.3864E+04	1.9450E+01	1.3749E+03	6.3549E+03	3.7655E+05
7.9376E+02	1.5723E+03	3.0420E+04	2.7809E+04	6.7149E+04	2.8187E+01	1.3749E+03	5.8253E+03	6.3636E+05
7.9376E+02	1.5161E+03	4.3385E+04	2.7809E+04	6.0434E+04	6.3125E+01	1.3749E+03	5.2957E+03	9.2705E+05
7.9376E+02	1.4600E+03	6.6188E+04	2.7809E+04	5.3719E+04	4.5024E+01	1.3749E+03	4.7661E+03	1.2824E+06
7.9376E+02	1.4038E+03	7.1279E+04	2.7809E+04	4.7004E+04	5.7843E+01	1.3749E+03	4.2366E+03	1.8391E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.9376E+02	1.3477E+03	1.0648E+05	2.7809E+04	4.0289E+04	7.1991E+01	1.3749E+03	3.7070E+03	1.9971E+06
7.9376E+02	1.2915E+03	2.0149E+05	2.7809E+04	3.3575E+04	2.4872E+02	1.3749E+03	3.1774E+03	2.7782E+06
7.9376E+02	1.2354E+03	2.8800E+05	2.7809E+04	2.6860E+04	2.7275E+02	1.3749E+03	2.6479E+03	3.5285E+06
7.9376E+02	1.1792E+03	3.2037E+05	2.7809E+04	2.0145E+04	7.0866E+03	1.3749E+03	2.1183E+03	3.6012E+06
7.9376E+02	1.1231E+03	5.0995E+05	2.7809E+04	1.3430E+04	4.1470E+03	1.3749E+03	1.5887E+03	3.9156E+06
7.9376E+02	1.0669E+03	7.2702E+05	2.7809E+04	6.7149E+03	5.9790E+04	1.3749E+03	1.0591E+03	4.9718E+06
7.9376E+02	1.0108E+03	8.4796E+05	2.7809E+04	0.0000E+00	1.6106E+05	1.3749E+03	5.2957E+02	1.0312E+07
7.9376E+02	9.5460E+02	1.2916E+06	1.9788E+04	3.2232E+05	1.3359E+00	1.3749E+03	0.0000E+00	2.3842E+07
7.9376E+02	8.9845E+02	1.4612E+06	1.9788E+04	1.7459E+05	5.3125E-02	7.4157E+02	2.1183E+04	5.3125E-02
7.9376E+02	8.4230E+02	2.1207E+06	1.9788E+04	1.6116E+05	2.6717E+00	7.4157E+02	1.8535E+04	1.2299E+01
7.9376E+02	7.8614E+02	2.5603E+06	1.9788E+04	1.5444E+05	2.0140E+00	7.4157E+02	1.7476E+04	5.3125E-02
7.9376E+02	7.2999E+02	3.2862E+06	1.9788E+04	1.4773E+05	2.3750E+00	7.4157E+02	1.6946E+04	4.8225E-01
7.9376E+02	6.7384E+02	3.8321E+06	1.9788E+04	1.3430E+05	4.1250E+00	7.4157E+02	1.6417E+04	5.3125E-02
7.9376E+02	6.1768E+02	4.8002E+06	1.9788E+04	1.2758E+05	1.2500E+00	7.4157E+02	1.5887E+04	3.0585E+02
7.9376E+02	5.6153E+02	5.1634E+06	1.9788E+04	1.2087E+05	6.2500E-01	7.4157E+02	1.5358E+04	5.3198E+02
7.9376E+02	5.0538E+02	6.1475E+06	1.9788E+04	1.1415E+05	4.3358E+00	7.4157E+02	1.4828E+04	3.4571E+02
7.9376E+02	4.4922E+02	6.5874E+06	1.9788E+04	1.0744E+05	7.2108E+00	7.4157E+02	1.4298E+04	1.6550E+02
7.9376E+02	3.9307E+02	6.8730E+06	1.9788E+04	1.0072E+05	4.1250E+00	7.4157E+02	1.3769E+04	3.4424E+03
7.9376E+02	3.3692E+02	6.3356E+06	1.9788E+04	9.4009E+04	6.2967E+00	7.4157E+02	1.3239E+04	2.6500E+03
7.9376E+02	2.8077E+02	5.5624E+06	1.9788E+04	8.7294E+04	2.7744E+01	7.4157E+02	1.2710E+04	1.6629E+03
7.9376E+02	2.2461E+02	5.1057E+06	1.9788E+04	8.0579E+04	5.6243E+01	7.4157E+02	1.2180E+04	3.0011E+03
7.9376E+02	1.6846E+02	5.4137E+06	1.9788E+04	7.3864E+04	2.5621E+01	7.4157E+02	1.1651E+04	8.6967E+03
7.9376E+02	1.1231E+02	8.7943E+06	1.9788E+04	6.7149E+04	6.4380E+01	7.4157E+02	1.1121E+04	1.2848E+04
7.9376E+02	5.6153E+01	2.0112E+07	1.9788E+04	6.0434E+04	1.5674E+02	7.4157E+02	1.0591E+04	1.3989E+04
7.9376E+02	0.0000E+00	2.6374E+07	1.9788E+04	5.3719E+04	1.7786E+03	7.4157E+02	1.0062E+04	5.4347E+04
7.2460E+02	2.3023E+03	1.8646E+02	1.9788E+04	4.7004E+04	1.9907E+03	7.4157E+02	9.5323E+03	4.6093E+04
7.2460E+02	2.2461E+03	3.8983E+02	1.9788E+04	4.0289E+04	1.8645E+03	7.4157E+02	9.0027E+03	8.6897E+04
7.2460E+02	2.1900E+03	7.6414E+02	1.9788E+04	3.3575E+04	4.5610E+02	7.4157E+02	8.4731E+03	1.1428E+05
7.2460E+02	2.1338E+03	1.9905E+02	1.9788E+04	2.6860E+04	7.1549E+03	7.4157E+02	7.9436E+03	1.2921E+05
7.2460E+02	2.0777E+03	2.4395E+03	1.9788E+04	2.0145E+04	4.5649E+03	7.4157E+02	7.4140E+03	2.2520E+05
7.2460E+02	2.0215E+03	6.5305E+02	1.9788E+04	1.3430E+04	8.2868E+03	7.4157E+02	6.8844E+03	3.9383E+05
7.2460E+02	1.9654E+03	2.9656E+03	1.9788E+04	6.7149E+03	1.3382E+05	7.4157E+02	6.3549E+03	5.3942E+05
7.2460E+02	1.9092E+03	1.9221E+03	1.9788E+04	0.0000E+00	5.8330E+05	7.4157E+02	5.8253E+03	9.8536E+05
7.2460E+02	1.8531E+03	5.1360E+03	1.1768E+04	3.3575E+05	1.3359E+00	7.4157E+02	5.2957E+03	1.1878E+06
7.2460E+02	1.7969E+03	6.3260E+03	1.1768E+04	1.6116E+05	5.3125E-02	7.4157E+02	4.7661E+03	1.7344E+06
7.2460E+02	1.7407E+03	1.3684E+04	1.1768E+04	1.4773E+05	1.3359E+00	7.4157E+02	4.2366E+03	2.2270E+06
7.2460E+02	1.6846E+03	2.0574E+04	1.1768E+04	1.4101E+05	8.3750E-01	7.4157E+02	3.7070E+03	2.8847E+06
7.2460E+02	1.6284E+03	3.5894E+04	1.1768E+04	1.3430E+05	2.5344E+00	7.4157E+02	3.1774E+03	3.0081E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.2460E+02	1.5723E+03	5.9349E+04	1.1768E+04	1.2758E+05	2.1250E-01	7.4157E+02	2.6479E+03	4.8511E+06
7.2460E+02	1.5161E+03	6.4622E+04	1.1768E+04	1.2087E+05	1.4952E+00	7.4157E+02	2.1183E+03	5.9563E+06
7.2460E+02	1.4600E+03	1.0872E+05	1.1768E+04	1.1415E+05	1.4421E+00	7.4157E+02	1.5887E+03	6.1121E+06
7.2460E+02	1.4038E+03	1.2899E+05	1.1768E+04	1.0744E+05	5.3031E+00	7.4157E+02	1.0591E+03	7.4158E+06
7.2460E+02	1.3477E+03	1.5699E+05	1.1768E+04	1.0072E+05	1.2370E+01	7.4157E+02	5.2957E+02	1.6089E+07
7.2460E+02	1.2915E+03	2.4140E+05	1.1768E+04	9.4009E+04	1.7914E+01	7.4157E+02	0.0000E+00	3.6088E+07
7.2460E+02	1.2354E+03	3.4621E+05	1.1768E+04	8.7294E+04	1.3044E+01	1.0821E+02	1.8535E+04	4.2913E-01
7.2460E+02	1.1792E+03	5.2562E+05	1.1768E+04	8.0579E+04	5.1818E+03	1.0821E+02	1.8005E+04	4.2913E-01
7.2460E+02	1.1231E+03	5.5871E+05	1.1768E+04	7.3864E+04	2.5960E+04	1.0821E+02	1.7476E+04	4.7773E+00
7.2460E+02	1.0669E+03	7.8065E+05	1.1768E+04	6.7149E+04	5.3213E+03	1.0821E+02	1.6946E+04	5.7015E+01
7.2460E+02	1.0108E+03	9.4696E+05	1.1768E+04	6.0434E+04	1.0647E+04	1.0821E+02	1.6417E+04	3.0117E+01
7.2460E+02	9.5460E+02	1.2182E+06	1.1768E+04	5.3719E+04	3.1332E+04	1.0821E+02	1.5887E+04	6.4847E+01
7.2460E+02	8.9845E+02	1.7936E+06	1.1768E+04	4.7004E+04	1.0718E+04	1.0821E+02	1.5358E+04	3.6226E+02
7.2460E+02	8.4230E+02	2.0878E+06	1.1768E+04	4.0289E+04	2.2855E+04	1.0821E+02	1.4828E+04	4.5088E+03
7.2460E+02	7.8614E+02	2.9046E+06	1.1768E+04	3.3575E+04	2.8302E+04	1.0821E+02	1.4298E+04	4.6908E+03
7.2460E+02	7.2999E+02	3.1889E+06	1.1768E+04	2.6860E+04	1.8182E+04	1.0821E+02	1.3769E+04	5.1477E+03
7.2460E+02	6.7384E+02	4.0547E+06	1.1768E+04	2.0145E+04	2.1607E+04	1.0821E+02	1.3239E+04	2.6167E+04
7.2460E+02	6.1768E+02	4.8129E+06	1.1768E+04	1.3430E+04	4.5305E+04	1.0821E+02	1.2710E+04	3.0030E+04
7.2460E+02	5.6153E+02	5.4352E+06	1.1768E+04	6.7149E+03	5.6470E+05	1.0821E+02	1.2180E+04	8.5818E+04
7.2460E+02	5.0538E+02	5.9614E+06	1.1768E+04	0.0000E+00	3.3074E+06	1.0821E+02	1.1651E+04	7.9929E+04
7.2460E+02	4.4922E+02	6.4382E+06	3.7471E+03	2.2159E+05	5.3125E-02	1.0821E+02	1.1121E+04	1.2877E+05
7.2460E+02	3.9307E+02	6.3186E+06	3.7471E+03	2.0145E+05	5.3125E-02	1.0821E+02	1.0591E+04	8.9063E+04
7.2460E+02	3.3692E+02	6.1433E+06	3.7471E+03	1.9473E+05	5.3125E-02	1.0821E+02	1.0062E+04	9.3814E+04
7.2460E+02	2.8077E+02	5.4779E+06	3.7471E+03	1.7459E+05	5.3125E-02	1.0821E+02	9.5323E+03	1.0067E+05
7.2460E+02	2.2461E+02	4.7448E+06	3.7471E+03	1.6787E+05	6.2500E-01	1.0821E+02	9.0027E+03	1.2046E+05
7.2460E+02	1.6846E+02	4.9434E+06	3.7471E+03	1.6116E+05	1.4952E+00	1.0821E+02	8.4731E+03	1.9145E+05
7.2460E+02	1.1231E+02	8.9051E+06	3.7471E+03	1.5444E+05	7.5288E-01	1.0821E+02	7.9436E+03	2.8298E+05
7.2460E+02	5.6153E+01	2.2031E+07	3.7471E+03	1.4773E+05	2.0671E+00	1.0821E+02	7.4140E+03	3.7300E+05
7.2460E+02	0.0000E+00	2.8774E+07	3.7471E+03	1.4101E+05	1.3563E+00	1.0821E+02	6.8844E+03	4.9113E+05
6.5545E+02	2.5830E+03	1.5125E+02	3.7471E+03	1.3430E+05	1.4421E+00	1.0821E+02	6.3549E+03	6.8785E+05
6.5545E+02	2.5269E+03	6.9666E+01	3.7471E+03	1.2758E+05	2.6921E+00	1.0821E+02	5.8253E+03	1.1952E+06
6.5545E+02	2.4707E+03	2.0724E+02	3.7471E+03	1.2087E+05	1.4952E+00	1.0821E+02	5.2957E+03	1.4945E+06
6.5545E+02	2.4146E+03	1.4659E+02	3.7471E+03	1.1415E+05	1.0343E+04	1.0821E+02	4.7661E+03	2.0756E+06
6.5545E+02	2.3584E+03	2.7993E+01	3.7471E+03	1.0744E+05	2.0683E+04	1.0821E+02	4.2366E+03	2.7059E+06
6.5545E+02	2.3023E+03	1.3907E+02	3.7471E+03	1.0072E+05	1.0352E+04	1.0821E+02	3.7070E+03	3.4214E+06
6.5545E+02	2.2461E+03	9.9692E+01	3.7471E+03	9.4009E+04	3.1078E+04	1.0821E+02	3.1774E+03	4.3793E+06
6.5545E+02	2.1900E+03	1.8516E+03	3.7471E+03	8.7294E+04	6.7298E+04	1.0821E+02	2.6479E+03	6.1273E+06
6.5545E+02	2.1338E+03	1.0621E+03	3.7471E+03	8.0579E+04	9.6481E+04	1.0821E+02	2.1183E+03	8.0381E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.5545E+02	2.0777E+03	8.9280E+02	3.7471E+03	7.3864E+04	7.7732E+04	1.0821E+02	1.5887E+03	9.4055E+06
6.5545E+02	2.0215E+03	2.4600E+03	3.7471E+03	6.7149E+04	1.2426E+05	1.0821E+02	1.0591E+03	1.0409E+07
6.5545E+02	1.9654E+03	7.0192E+03	3.7471E+03	6.0434E+04	8.8227E+04	1.0821E+02	5.2957E+02	2.1332E+07
6.5545E+02	1.9092E+03	4.1240E+03	3.7471E+03	5.3719E+04	1.2995E+05	1.0821E+02	0.0000E+00	4.7806E+07
6.5545E+02	1.8531E+03	9.2052E+03	3.7471E+03	4.7004E+04	2.0439E+05	-	1.8005E+04	8.3520E+01
6.5545E+02	1.7969E+03	7.9976E+03	3.7471E+03	4.0289E+04	2.4687E+05	-	1.7476E+04	4.8225E-01
6.5545E+02	1.7407E+03	1.5549E+04	3.7471E+03	3.3575E+04	3.6222E+05	-	1.6946E+04	1.6979E+00
6.5545E+02	1.6846E+03	3.0419E+04	3.7471E+03	2.6860E+04	7.1148E+05	-	1.6417E+04	1.0369E+00
6.5545E+02	1.6284E+03	4.2429E+04	3.7471E+03	2.0145E+04	1.4106E+06	-	1.5887E+04	1.6247E+02
6.5545E+02	1.5723E+03	3.1684E+04	3.7471E+03	1.3430E+04	2.3351E+06	-	1.5358E+04	7.3158E+02
6.5545E+02	1.5161E+03	5.7083E+04	3.7471E+03	6.7149E+03	3.7806E+06	-	1.4828E+04	2.0019E+03
6.5545E+02	1.4600E+03	1.0221E+05	3.7471E+03	0.0000E+00	1.3490E+07	-	1.4298E+04	4.7818E+03
6.5545E+02	1.4038E+03	1.1677E+05	-	3.0889E+05	1.3359E+00	-	1.3769E+04	2.0048E+04
6.5545E+02	1.3477E+03	1.7341E+05	-	2.2159E+05	5.3125E-02	-	1.3239E+04	1.7697E+04
6.5545E+02	1.2915E+03	2.3024E+05	-	2.1488E+05	1.7500E+00	-	1.2710E+04	6.1270E+04
6.5545E+02	1.2354E+03	2.7121E+05	-	2.0816E+05	1.0625E-01	-	1.2180E+04	1.2359E+05
6.5545E+02	1.1792E+03	3.9910E+05	-	2.0145E+05	1.0625E-01	-	1.1651E+04	1.2815E+05
6.5545E+02	1.1231E+03	4.5470E+05	-	1.8130E+05	1.0625E-01	-	1.1121E+04	1.3778E+05
6.5545E+02	1.0669E+03	6.0198E+05	-	1.7459E+05	1.0625E-01	-	1.0591E+04	1.1540E+05
6.5545E+02	1.0108E+03	9.2666E+05	-	1.6787E+05	1.8100E-01	-	1.0062E+04	1.3104E+05
6.5545E+02	9.5460E+02	1.1461E+06	-	1.6116E+05	1.3359E+00	-	9.5323E+03	2.0412E+05
6.5545E+02	8.9845E+02	1.4468E+06	-	1.5444E+05	1.0625E-01	-	9.0027E+03	1.3121E+05
6.5545E+02	8.4230E+02	1.6360E+06	-	1.4773E+05	2.0177E+00	-	8.4731E+03	2.2873E+05
6.5545E+02	7.8614E+02	2.1884E+06	-	1.4101E+05	1.4854E+00	-	7.9436E+03	2.7402E+05
6.5545E+02	7.2999E+02	2.7901E+06	-	1.3430E+05	2.6563E-01	-	7.4140E+03	3.6752E+05
6.5545E+02	6.7384E+02	2.9083E+06	-	1.2758E+05	1.3890E+00	-	6.8844E+03	5.7729E+05
6.5545E+02	6.1768E+02	3.3844E+06	-	1.2087E+05	3.4807E+00	-	6.3549E+03	8.0420E+05
6.5545E+02	5.6153E+02	4.0837E+06	-	1.1415E+05	5.2022E+03	-	5.8253E+03	1.1245E+06

DNV

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.5545E+02	5.0538E+02	4.2601E+06	-	1.0744E+05	2.6596E+01	-	5.2957E+03	1.7502E+06
6.5545E+02	4.4922E+02	4.5979E+06	-	1.0072E+05	5.1891E+03	-	4.7661E+03	2.2400E+06
6.5545E+02	3.9307E+02	5.1693E+06	-	9.4009E+04	4.7556E+01	-	4.2366E+03	2.9642E+06
6.5545E+02	3.3692E+02	4.4905E+06	-	8.7294E+04	6.9953E+03	-	3.7070E+03	3.7965E+06
6.5545E+02	2.8077E+02	4.2544E+06	-	8.0579E+04	5.2242E+03	-	3.1774E+03	5.0006E+06
6.5545E+02	2.2461E+02	3.8010E+06	-	7.3864E+04	2.7975E+02	-	2.6479E+03	5.8525E+06
6.5545E+02	1.6846E+02	4.0730E+06	-	6.7149E+04	1.6419E+04	-	2.1183E+03	7.1586E+06
6.5545E+02	1.1231E+02	7.2154E+06	-	6.0434E+04	1.6098E+04	-	1.5887E+03	7.6218E+06
6.5545E+02	5.6153E+01	1.9412E+07	-	5.3719E+04	2.8999E+04	-	1.0591E+03	9.5174E+06
6.5545E+02	0.0000E+00	2.7352E+07	-	4.7004E+04	2.7160E+04	-	5.2957E+02	1.9382E+07
5.8629E+02	2.6953E+03	4.7773E+00	-	4.0289E+04	1.0192E+05	-	0.0000E+00	3.9984E+07
5.8629E+02	2.6392E+03	4.7773E+00	-	3.3575E+04	1.8569E+05	-	1.8005E+04	5.2170E+01
5.8629E+02	2.5830E+03	5.6947E+01	-	2.6860E+04	4.9588E+05	-	1.7476E+04	8.7757E-01
5.8629E+02	2.5269E+03	2.6514E+02	-	2.0145E+04	9.3895E+05	-	1.6946E+04	8.0395E-01
5.8629E+02	2.4707E+03	7.8801E+01	-	1.3430E+04	1.6067E+06	-	1.6417E+04	3.2461E+02
5.8629E+02	2.4146E+03	8.9065E+01	-	6.7149E+03	2.8675E+06	-	1.5887E+04	2.4633E+01
5.8629E+02	2.3584E+03	2.2581E+02	-	0.0000E+00	7.8683E+06	-	1.5358E+04	2.9204E+02
5.8629E+02	2.3023E+03	2.9044E+02	-	3.1560E+05	1.3359E+00	-	1.4828E+04	3.5892E+02
5.8629E+02	2.2461E+03	3.5989E+02	-	3.0889E+05	2.6717E+00	-	1.4298E+04	4.8510E+03
5.8629E+02	2.1900E+03	7.3827E+02	-	2.8874E+05	1.3359E+00	-	1.3769E+04	9.7089E+03
5.8629E+02	2.1338E+03	1.3983E+03	-	2.8203E+05	6.2500E-01	-	1.3239E+04	1.0184E+04
5.8629E+02	2.0777E+03	3.9078E+03	-	2.6860E+05	1.7500E+00	-	1.2710E+04	9.6685E+03
5.8629E+02	2.0215E+03	1.4338E+03	-	2.6188E+05	1.7500E+00	-	1.2180E+04	2.9121E+04
5.8629E+02	1.9654E+03	4.4806E+03	-	2.5517E+05	1.7500E+00	-	1.1651E+04	3.1847E+04
5.8629E+02	1.9092E+03	3.3325E+03	-	2.0145E+05	5.3125E-02	-	1.1121E+04	5.7597E+04
5.8629E+02	1.8531E+03	9.0074E+03	-	1.9473E+05	6.7813E-01	-	1.0591E+04	7.6350E+04
5.8629E+02	1.7969E+03	6.4043E+03	-	1.8802E+05	1.5938E-01	-	1.0062E+04	1.0371E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.8629E+02	1.7407E+03	1.3148E+04	-	1.7459E+05	5.3125E-02	-	9.5323E+03	1.1191E+05
5.8629E+02	1.6846E+03	2.6567E+04	-	1.6116E+05	1.0996E-01	-	9.0027E+03	1.5925E+05
5.8629E+02	1.6284E+03	2.3805E+04	-	1.5444E+05	1.4421E+00	-	8.4731E+03	1.9449E+05
5.8629E+02	1.5723E+03	3.8419E+04	-	1.4773E+05	1.4989E+00	-	7.9436E+03	2.4650E+05
5.8629E+02	1.5161E+03	6.4571E+04	-	1.4101E+05	4.2871E-01	-	7.4140E+03	3.5110E+05
5.8629E+02	1.4600E+03	8.8684E+04	-	1.3430E+05	2.8818E+00	-	6.8844E+03	5.6483E+05
5.8629E+02	1.4038E+03	7.2954E+04	-	1.2758E+05	1.4272E-01	-	6.3549E+03	7.5888E+05
5.8629E+02	1.3477E+03	1.3281E+05	-	1.2087E+05	1.6741E+00	-	5.8253E+03	1.0298E+06
5.8629E+02	1.2915E+03	1.8729E+05	-	1.1415E+05	3.1624E+02	-	5.2957E+03	1.3440E+06
5.8629E+02	1.2354E+03	2.1504E+05	-	1.0744E+05	6.9597E+01	-	4.7661E+03	1.9775E+06
5.8629E+02	1.1792E+03	2.5242E+05	-	1.0072E+05	2.0789E+03	-	4.2366E+03	2.3490E+06
5.8629E+02	1.1231E+03	3.6096E+05	-	9.4009E+04	1.0692E+02	-	3.7070E+03	2.9837E+06
5.8629E+02	1.0669E+03	4.4680E+05	-	8.7294E+04	1.8077E+03	-	3.1774E+03	3.6060E+06
5.8629E+02	1.0108E+03	5.2917E+05	-	8.0579E+04	6.4184E+02	-	2.6479E+03	4.4145E+06
5.8629E+02	9.5460E+02	7.0178E+05	-	7.3864E+04	4.0105E+03	-	2.1183E+03	4.3234E+06
5.8629E+02	8.9845E+02	8.5923E+05	-	6.7149E+04	6.1456E+03	-	1.5887E+03	5.1787E+06
5.8629E+02	8.4230E+02	1.1597E+06	-	6.0434E+04	2.1050E+04	-	1.0591E+03	6.2130E+06
5.8629E+02	7.8614E+02	1.3105E+06	-	5.3719E+04	1.9730E+04	-	5.2957E+02	1.3872E+07
5.8629E+02	7.2999E+02	1.6947E+06	-	4.7004E+04	7.1049E+04	-	0.0000E+00	3.1296E+07
5.8629E+02	6.7384E+02	1.9261E+06	-	4.0289E+04	1.5151E+05	-	2.2242E+04	5.3125E-02
5.8629E+02	6.1768E+02	2.4355E+06	-	3.3575E+04	4.0323E+05	-	2.0653E+04	5.3125E-02
5.8629E+02	5.6153E+02	2.5670E+06	-	2.6860E+04	7.4959E+05	-	2.0124E+04	8.3414E+01
5.8629E+02	5.0538E+02	2.7630E+06	-	2.0145E+04	1.3301E+06	-	1.9594E+04	5.3125E-02
5.8629E+02	4.4922E+02	3.2651E+06	-	1.3430E+04	1.7993E+06	-	1.9065E+04	7.3620E-02
5.8629E+02	3.9307E+02	3.1257E+06	-	6.7149E+03	3.9987E+06	-	1.8005E+04	7.3620E-02
5.8629E+02	3.3692E+02	3.1602E+06	-	0.0000E+00	7.8878E+06	-	1.7476E+04	2.5701E+00
5.8629E+02	2.8077E+02	3.4469E+06	-	3.2232E+05	2.6717E+00	-	1.6946E+04	1.5112E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.8629E+02	2.2461E+02	3.2663E+06	-	3.0217E+05	3.0859E+00	-	1.6417E+04	6.1757E+01
5.8629E+02	1.6846E+02	3.6142E+06	-	2.9546E+05	1.7500E+00	-	1.5887E+04	1.5028E+01
5.8629E+02	1.1231E+02	5.9117E+06	-	2.8874E+05	5.2500E+00	-	1.5358E+04	1.5688E+01
5.8629E+02	5.6153E+01	1.7698E+07	-	2.8203E+05	3.0859E+00	-	1.4828E+04	1.7245E+02
5.8629E+02	0.0000E+00	2.6952E+07	-	2.7531E+05	8.8031E+00	-	1.4298E+04	4.6685E+02
5.1713E+02	2.7515E+03	1.2299E+01	-	2.6860E+05	5.2500E+00	-	1.3769E+04	1.6687E+03
5.1713E+02	2.6392E+03	4.7773E+00	-	2.6188E+05	1.7500E+00	-	1.3239E+04	4.6317E+02
5.1713E+02	2.4707E+03	1.4109E+00	-	2.5517E+05	9.3750E+00	-	1.2710E+04	9.6911E+02
5.1713E+02	2.4146E+03	1.4332E+01	-	2.4174E+05	3.0000E+00	-	1.2180E+04	6.6861E+03
5.1713E+02	2.3584E+03	2.8665E+00	-	2.3502E+05	5.3125E-02	-	1.1651E+04	2.0394E+03
5.1713E+02	2.3023E+03	2.3299E+02	-	2.2831E+05	1.7500E+00	-	1.1121E+04	1.6462E+04
5.1713E+02	2.2461E+03	2.4395E+02	-	2.1488E+05	8.9063E-01	-	1.0591E+04	1.2963E+04
5.1713E+02	2.1900E+03	5.1128E+02	-	2.0816E+05	6.7813E-01	-	1.0062E+04	1.7956E+04
5.1713E+02	2.1338E+03	8.4603E+02	-	2.0145E+05	5.3125E-02	-	9.5323E+03	3.7398E+04
5.1713E+02	2.0777E+03	3.2884E+03	-	1.9473E+05	1.0625E-01	-	9.0027E+03	7.8720E+04
5.1713E+02	2.0215E+03	2.8517E+03	-	1.8802E+05	1.5938E-01	-	8.4731E+03	1.1425E+05
5.1713E+02	1.9654E+03	2.3061E+03	-	1.8130E+05	3.1875E-01	-	7.9436E+03	1.2772E+05
5.1713E+02	1.9092E+03	3.3070E+03	-	1.7459E+05	7.3125E-01	-	7.4140E+03	2.7598E+05
5.1713E+02	1.8531E+03	5.9976E+03	-	1.6787E+05	7.8438E-01	-	6.8844E+03	4.1491E+05
5.1713E+02	1.7969E+03	2.9903E+03	-	1.6116E+05	7.3620E-02	-	6.3549E+03	5.3042E+05
5.1713E+02	1.7407E+03	3.8224E+03	-	1.5444E+05	7.6761E+00	-	5.8253E+03	9.1125E+05
5.1713E+02	1.6846E+03	1.4511E+04	-	1.4773E+05	2.6891E+00	-	5.2957E+03	1.2863E+06
5.1713E+02	1.6284E+03	1.4875E+04	-	1.4101E+05	8.4856E+01	-	4.7661E+03	1.5955E+06
5.1713E+02	1.5723E+03	1.7062E+04	-	1.3430E+05	1.6849E+02	-	4.2366E+03	1.9710E+06
5.1713E+02	1.5161E+03	2.2891E+04	-	1.2758E+05	1.0733E+01	-	3.7070E+03	2.5504E+06
5.1713E+02	1.4600E+03	2.0308E+04	-	1.2087E+05	2.8799E+01	-	3.1774E+03	3.0893E+06
5.1713E+02	1.4038E+03	5.1104E+04	-	1.1415E+05	6.3616E+01	-	2.6479E+03	2.3289E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.1713E+02	1.3477E+03	7.6353E+04	-	1.0744E+05	1.8551E+03	-	2.1183E+03	2.8039E+06
5.1713E+02	1.2915E+03	5.8107E+04	-	1.0072E+05	1.7946E+03	-	1.5887E+03	3.2113E+06
5.1713E+02	1.2354E+03	9.0308E+04	-	9.4009E+04	3.5770E+02	-	1.0591E+03	4.2538E+06
5.1713E+02	1.1792E+03	1.2378E+05	-	8.7294E+04	2.5339E+03	-	5.2957E+02	1.0114E+07
5.1713E+02	1.1231E+03	1.8654E+05	-	8.0579E+04	3.0659E+03	-	0.0000E+00	1.9979E+07
5.1713E+02	1.0669E+03	2.0914E+05	-	7.3864E+04	5.8090E+03	-	1.8535E+04	6.2500E-01
5.1713E+02	1.0108E+03	2.4257E+05	-	6.7149E+04	1.2357E+04	-	1.8005E+04	9.3070E-01
5.1713E+02	9.5460E+02	3.2729E+05	-	6.0434E+04	2.4103E+04	-	1.7476E+04	9.3188E-01
5.1713E+02	8.9845E+02	3.5655E+05	-	5.3719E+04	3.2284E+04	-	1.6946E+04	1.0447E+00
5.1713E+02	8.4230E+02	4.4105E+05	-	4.7004E+04	6.7279E+04	-	1.6417E+04	6.1800E+01
5.1713E+02	7.8614E+02	5.8731E+05	-	4.0289E+04	2.2507E+05	-	1.5887E+04	6.7231E+00
5.1713E+02	7.2999E+02	6.3203E+05	-	3.3575E+04	6.0192E+05	-	1.5358E+04	1.4920E+02
5.1713E+02	6.7384E+02	7.5233E+05	-	2.6860E+04	1.6687E+06	-	1.4828E+04	7.9592E+01
5.1713E+02	6.1768E+02	8.0034E+05	-	2.0145E+04	3.6281E+06	-	1.4298E+04	1.6211E+02
5.1713E+02	5.6153E+02	1.1638E+06	-	1.3430E+04	5.7699E+06	-	1.3769E+04	3.5816E+02
5.1713E+02	5.0538E+02	1.1115E+06	-	6.7149E+03	1.0487E+07	-	1.3239E+04	4.8773E+01
5.1713E+02	4.4922E+02	1.4384E+06	-	0.0000E+00	1.7897E+07	-	1.2710E+04	3.4551E+01
5.1713E+02	3.9307E+02	1.8388E+06	-	3.0217E+05	1.3359E+00	-	1.2180E+04	8.0323E+01
5.1713E+02	3.3692E+02	2.2567E+06	-	2.9546E+05	1.3359E+00	-	1.1651E+04	1.9001E+03
5.1713E+02	2.8077E+02	3.1510E+06	-	2.8874E+05	9.6302E+00	-	1.1121E+04	9.1430E+02
5.1713E+02	2.2461E+02	3.5578E+06	-	2.8203E+05	1.3089E+01	-	1.0591E+04	5.1819E+03
5.1713E+02	1.6846E+02	4.1688E+06	-	2.7531E+05	4.4217E+00	-	1.0062E+04	6.3825E+02
5.1713E+02	1.1231E+02	6.3064E+06	-	2.6860E+05	1.4128E+01	-	9.5323E+03	3.4808E+03
5.1713E+02	5.6153E+01	1.8066E+07	-	2.6188E+05	4.8358E+00	-	9.0027E+03	8.8201E+03
5.1713E+02	0.0000E+00	3.1675E+07	-	2.5517E+05	2.3750E+00	-	8.4731E+03	2.4535E+04
4.4798E+02	2.6392E+03	1.2299E+01	-	2.4845E+05	5.3125E-02	-	7.9436E+03	6.6814E+04
4.4798E+02	2.5830E+03	1.2400E+01	-	2.3502E+05	6.2500E-01	-	7.4140E+05	1.2202E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.4798E+02	2.4707E+03	6.1663E+00	-	2.2831E+05	5.3125E-02	-	6.8844E+03	1.9357E+05
4.4798E+02	2.4146E+03	2.0426E+02	-	2.2159E+05	5.3125E-02	-	6.3549E+03	3.3940E+05
4.4798E+02	2.3584E+03	4.7773E+00	-	2.0816E+05	5.3125E-02	-	5.8253E+03	4.8659E+05
4.4798E+02	2.3023E+03	1.5901E+02	-	1.8802E+05	1.5938E-01	-	5.2957E+03	7.9922E+05
4.4798E+02	2.2461E+03	1.1554E+02	-	1.7459E+05	4.2065E-01	-	4.7661E+03	1.0440E+06
4.4798E+02	2.1900E+03	5.5646E+01	-	1.6787E+05	1.2675E-01	-	4.2366E+03	1.3562E+06
4.4798E+02	2.1338E+03	3.1457E+02	-	1.6116E+05	4.7392E+00	-	3.7070E+03	1.8906E+06
4.4798E+02	2.0777E+03	2.6621E+02	-	1.5444E+05	1.9431E+01	-	3.1774E+03	1.9108E+06
4.4798E+02	2.0215E+03	5.8140E+02	-	1.4773E+05	3.1993E+01	-	2.6479E+03	2.0693E+06
4.4798E+02	1.9654E+03	1.2175E+03	-	1.4101E+05	1.0232E+02	-	2.1183E+03	2.1008E+06
4.4798E+02	1.9092E+03	9.0895E+02	-	1.3430E+05	2.7463E+01	-	1.5887E+03	1.8899E+06
4.4798E+02	1.8531E+03	1.4558E+03	-	1.2758E+05	2.8051E+01	-	1.0591E+03	3.1779E+06
4.4798E+02	1.7969E+03	2.6769E+03	-	1.2087E+05	3.1410E+02	-	5.2957E+02	6.5777E+06
4.4798E+02	1.7407E+03	5.1312E+03	-	1.1415E+05	3.1885E+01	-	0.0000E+00	1.2950E+07
4.4798E+02	1.6846E+03	2.6486E+03	-	1.0744E+05	9.6120E+02	-	1.9065E+04	5.3125E-02
4.4798E+02	1.6284E+03	3.6287E+03	-	1.0072E+05	1.0592E+03	-	1.8535E+04	1.2675E-01
4.4798E+02	1.5723E+03	9.0250E+03	-	9.4009E+04	9.1864E+02	-	1.8005E+04	1.5239E+00
4.4798E+02	1.5161E+03	1.3694E+04	-	8.7294E+04	3.9996E+03	-	1.7476E+04	7.3620E-02
4.4798E+02	1.4600E+03	1.2440E+04	-	8.0579E+04	3.9713E+03	-	1.6946E+04	5.0275E-01
4.4798E+02	1.4038E+03	1.1484E+04	-	7.3864E+04	1.9843E+04	-	1.6417E+04	1.2675E-01
4.4798E+02	1.3477E+03	2.0464E+04	-	6.7149E+04	1.2772E+04	-	1.5887E+04	1.6016E+01
4.4798E+02	1.2915E+03	1.1891E+04	-	6.0434E+04	3.0292E+04	-	1.5358E+04	6.9893E+00
4.4798E+02	1.2354E+03	1.8718E+04	-	5.3719E+04	6.7557E+04	-	1.4828E+04	3.1657E+00
4.4798E+02	1.1792E+03	4.0922E+04	-	4.7004E+04	1.3858E+05	-	1.4298E+04	2.4118E+00
4.4798E+02	1.1231E+03	3.3719E+04	-	4.0289E+04	1.9622E+05	-	1.3769E+04	1.8013E+01
4.4798E+02	1.0669E+03	6.5908E+04	-	3.3575E+04	5.8505E+05	-	1.3239E+04	3.4140E+01
4.4798E+02	1.0108E+03	6.4099E+04	-	2.6860E+04	1.3900E+06	-	1.2710E+04	5.2120E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.4798E+02	9.5460E+02	8.2227E+04	-	2.0145E+04	3.7088E+06	-	1.2180E+04	4.3837E+01
4.4798E+02	8.9845E+02	1.1026E+05	-	1.3430E+04	6.3075E+06	-	1.1651E+04	1.1135E+01
4.4798E+02	8.4230E+02	1.5291E+05	-	6.7149E+03	1.1242E+07	-	1.1121E+04	4.7550E+01
4.4798E+02	7.8614E+02	1.5077E+05	-	0.0000E+00	1.8949E+07	-	1.0591E+04	6.4393E+02
4.4798E+02	7.2999E+02	1.8842E+05	-	3.0217E+05	6.9585E+00	-	1.0062E+04	4.3608E+01
4.4798E+02	6.7384E+02	1.5892E+05	-	2.9546E+05	1.3359E+00	-	9.5323E+03	2.6603E+02
4.4798E+02	6.1768E+02	2.3529E+05	-	2.8874E+05	6.5443E+00	-	9.0027E+03	2.8564E+03
4.4798E+02	5.6153E+02	3.5747E+05	-	2.8203E+05	7.5075E+00	-	8.4731E+03	5.1862E+03
4.4798E+02	5.0538E+02	4.3189E+05	-	2.7531E+05	1.4880E+01	-	7.9436E+03	2.2634E+03
4.4798E+02	4.4922E+02	7.9040E+05	-	2.6860E+05	5.8107E+00	-	7.4140E+03	1.9322E+04
4.4798E+02	3.9307E+02	1.3324E+06	-	2.6188E+05	1.7500E+00	-	6.8844E+03	5.6572E+04
4.4798E+02	3.3692E+02	2.3277E+06	-	2.5517E+05	1.7056E+01	-	6.3549E+03	9.8713E+04
4.4798E+02	2.8077E+02	3.2591E+06	-	2.4845E+05	5.2085E+00	-	5.8253E+03	1.9651E+05
4.4798E+02	2.2461E+02	4.8069E+06	-	2.4174E+05	6.2500E-01	-	5.2957E+03	3.0799E+05
4.4798E+02	1.6846E+02	5.4853E+06	-	2.3502E+05	4.7500E+00	-	4.7661E+03	5.1486E+05
4.4798E+02	1.1231E+02	7.5101E+06	-	2.2831E+05	1.4094E+00	-	4.2366E+03	7.4368E+05
4.4798E+02	5.6153E+01	1.8724E+07	-	2.2159E+05	6.7813E-01	-	3.7070E+03	8.6027E+05
4.4798E+02	0.0000E+00	3.5151E+07	-	2.1488E+05	1.8031E+00	-	3.1774E+03	1.1118E+06
3.7882E+02	2.6953E+03	1.7500E+00	-	2.0816E+05	5.3843E+00	-	2.6479E+03	1.1967E+06
3.7882E+02	2.5830E+03	4.8836E+00	-	2.0145E+05	1.8031E+00	-	2.1183E+03	1.1629E+06
3.7882E+02	2.5269E+03	4.7773E+00	-	1.9473E+05	6.1985E-01	-	1.5887E+03	1.0878E+06
3.7882E+02	2.4146E+03	1.1322E+01	-	1.8802E+05	1.1335E+01	-	1.0591E+03	1.7528E+06
3.7882E+02	2.3584E+03	1.2141E+01	-	1.8130E+05	1.8843E+00	-	5.2957E+02	4.2426E+06
3.7882E+02	2.3023E+03	1.2965E+01	-	1.7459E+05	2.1113E+01	-	0.0000E+00	8.5108E+06
3.7882E+02	2.2461E+03	5.9316E+01	-	1.6787E+05	8.0487E-01	-	2.1712E+04	5.3125E-02
3.7882E+02	2.1900E+03	2.6741E+01	-	1.6116E+05	1.4801E+00	-	1.9594E+04	4.2913E-01
3.7882E+02	2.1338E+03	1.7004E+02	-	1.5444E+05	1.0553E+01	-	1.8005E+04	8.7757E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.7882E+02	2.0777E+03	2.0883E+01	-	1.4773E+05	8.2434E+00	-	1.7476E+04	9.4458E+00
3.7882E+02	2.0215E+03	3.8607E+01	-	1.4101E+05	2.3435E+01	-	1.6946E+04	8.7757E-01
3.7882E+02	1.9654E+03	4.6671E+02	-	1.3430E+05	2.0389E+02	-	1.6417E+04	1.6079E+00
3.7882E+02	1.9092E+03	1.3540E+02	-	1.2758E+05	3.8329E+02	-	1.5887E+04	8.7757E-01
3.7882E+02	1.8531E+03	2.5997E+02	-	1.2087E+05	2.7887E+02	-	1.5358E+04	1.3221E+01
3.7882E+02	1.7969E+03	4.6779E+03	-	1.1415E+05	1.9422E+02	-	1.4828E+04	1.3803E+00
3.7882E+02	1.7407E+03	9.6331E+02	-	1.0744E+05	6.5233E+02	-	1.4298E+04	2.0673E+00
3.7882E+02	1.6846E+03	9.5779E+02	-	1.0072E+05	8.8682E+02	-	1.3769E+04	1.8212E+00
3.7882E+02	1.6284E+03	1.1500E+03	-	9.4009E+04	1.0733E+03	-	1.3239E+04	8.0395E-01
3.7882E+02	1.5723E+03	1.3063E+03	-	8.7294E+04	4.3584E+03	-	1.2710E+04	4.1346E+00
3.7882E+02	1.5161E+03	1.8308E+03	-	8.0579E+04	2.2578E+03	-	1.2180E+04	2.1940E+00
3.7882E+02	1.4600E+03	5.6354E+03	-	7.3864E+04	1.2785E+04	-	1.1651E+04	8.6796E+01
3.7882E+02	1.4038E+03	1.9564E+03	-	6.7149E+04	7.9935E+03	-	1.1121E+04	6.4240E+00
3.7882E+02	1.3477E+03	3.5376E+03	-	6.0434E+04	1.2714E+04	-	1.0591E+04	7.7163E+00
3.7882E+02	1.2915E+03	5.5615E+03	-	5.3719E+04	6.1590E+04	-	1.0062E+04	9.1491E+01
3.7882E+02	1.2354E+03	5.9725E+03	-	4.7004E+04	1.0592E+05	-	9.5323E+03	1.7196E+02
3.7882E+02	1.1792E+03	1.3278E+04	-	4.0289E+04	2.7744E+05	-	9.0027E+03	1.8755E+01
3.7882E+02	1.1231E+03	1.2615E+04	-	3.3575E+04	5.8721E+05	-	8.4731E+03	2.2662E+02
3.7882E+02	1.0669E+03	1.2404E+04	-	2.6860E+04	1.3092E+06	-	7.9436E+03	4.6988E+02
3.7882E+02	1.0108E+03	2.2145E+04	-	2.0145E+04	2.8032E+06	-	7.4140E+03	4.5506E+03
3.7882E+02	9.5460E+02	2.1747E+04	-	1.3430E+04	4.8102E+06	-	6.8844E+03	6.5913E+03
3.7882E+02	8.9845E+02	3.2486E+04	-	6.7149E+03	8.8929E+06	-	6.3549E+03	2.0235E+04
3.7882E+02	8.4230E+02	3.3555E+04	-	0.0000E+00	1.4574E+07	-	5.8253E+03	2.4820E+04
3.7882E+02	7.8614E+02	6.3989E+04	-	3.0217E+05	1.3359E+00	-	5.2957E+03	9.4537E+04
3.7882E+02	7.2999E+02	1.0079E+05	-	2.8874E+05	4.4748E+00	-	4.7661E+03	1.3708E+05
3.7882E+02	6.7384E+02	1.3136E+05	-	2.8203E+05	8.2943E+00	-	4.2366E+03	2.8929E+05
3.7882E+02	6.1768E+02	1.4468E+05	-	2.7531E+05	2.6717E+00	-	3.7070E+05	4.1515E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.7882E+02	5.6153E+02	1.9242E+05	-	2.6860E+05	1.7375E+01	-	3.1774E+03	5.7348E+05
3.7882E+02	5.0538E+02	4.0808E+05	-	2.6188E+05	5.2085E+00	-	2.6479E+03	5.8816E+05
3.7882E+02	4.4922E+02	6.6022E+05	-	2.5517E+05	6.7813E-01	-	2.1183E+03	6.0304E+05
3.7882E+02	3.9307E+02	1.1803E+06	-	2.4845E+05	4.8358E+00	-	1.5887E+03	6.3785E+05
3.7882E+02	3.3692E+02	2.0163E+06	-	2.4174E+05	1.0709E+01	-	1.0591E+03	9.3316E+05
3.7882E+02	2.8077E+02	3.4769E+06	-	2.3502E+05	2.3750E+00	-	5.2957E+02	2.2377E+06
3.7882E+02	2.2461E+02	5.1547E+06	-	2.2831E+05	1.7655E+01	-	0.0000E+00	4.9760E+06
3.7882E+02	1.6846E+02	6.5082E+06	-	2.2159E+05	8.7500E+00	-	1.8005E+04	4.8225E-01
3.7882E+02	1.1231E+02	6.8306E+06	-	2.1488E+05	1.0988E+01	-	1.5358E+04	8.4864E+01
3.7882E+02	5.6153E+01	1.3122E+07	-	2.0816E+05	6.4897E+00	-	1.2710E+04	2.7125E+00
3.7882E+02	0.0000E+00	3.1486E+07	-	2.0145E+05	2.0307E+00	-	1.1651E+04	1.0625E-01
3.0967E+02	2.6953E+03	1.7500E+00	-	1.9473E+05	4.7675E+00	-	1.1121E+04	1.3563E+00
3.0967E+02	2.4707E+03	1.3359E+00	-	1.8802E+05	2.8312E+01	-	1.0591E+04	3.1921E+00
3.0967E+02	2.3584E+03	8.3011E+00	-	1.8130E+05	8.6578E-01	-	1.0062E+04	8.4796E+00
3.0967E+02	2.3023E+03	4.3838E+00	-	1.7459E+05	9.7868E-01	-	9.5323E+03	3.4007E+00
3.0967E+02	2.2461E+03	5.3562E+00	-	1.6787E+05	1.7655E+01	-	9.0027E+03	2.0952E+01
3.0967E+02	2.1900E+03	1.2543E+01	-	1.6116E+05	5.5588E-01	-	8.4731E+03	5.2739E+00
3.0967E+02	2.1338E+03	2.1840E+01	-	1.5444E+05	1.4100E+01	-	7.9436E+03	4.9399E+01
3.0967E+02	2.0777E+03	2.2601E+02	-	1.4773E+05	2.9472E+01	-	7.4140E+03	3.4702E+02
3.0967E+02	2.0215E+03	4.1747E+02	-	1.4101E+05	6.6013E+01	-	6.8844E+03	8.5533E+01
3.0967E+02	1.9654E+03	1.7137E+01	-	1.3430E+05	7.2001E+01	-	6.3549E+03	6.2095E+02
3.0967E+02	1.9092E+03	7.1884E+01	-	1.2758E+05	3.2053E+02	-	5.8253E+03	1.3174E+03
3.0967E+02	1.8531E+03	7.6408E+01	-	1.2087E+05	2.5636E+02	-	5.2957E+03	7.6586E+02
3.0967E+02	1.7969E+03	2.1155E+01	-	1.1415E+05	8.5892E+02	-	4.7661E+03	1.5530E+04
3.0967E+02	1.7407E+03	1.7044E+02	-	1.0744E+05	8.8409E+02	-	4.2366E+03	3.8530E+04
3.0967E+02	1.6846E+03	2.1838E+03	-	1.0072E+05	1.2334E+03	-	3.7070E+03	5.2531E+04
3.0967E+02	1.6284E+03	4.9033E+02	-	9.4009E+04	3.9177E+03	-	3.1774E+05	1.0705E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.0967E+02	1.5723E+03	9.5729E+01	-	8.7294E+04	2.0286E+03	-	2.6479E+03	1.8240E+05
3.0967E+02	1.5161E+03	2.5453E+02	-	8.0579E+04	3.7354E+03	-	2.1183E+03	1.6256E+05
3.0967E+02	1.4600E+03	3.8336E+02	-	7.3864E+04	5.0014E+03	-	1.5887E+03	2.6776E+05
3.0967E+02	1.4038E+03	8.0950E+02	-	6.7149E+04	1.3494E+04	-	1.0591E+03	4.1243E+05
3.0967E+02	1.3477E+03	8.0047E+02	-	6.0434E+04	2.6203E+04	-	5.2957E+02	1.1443E+06
3.0967E+02	1.2915E+03	1.1642E+03	-	5.3719E+04	4.9149E+04	-	0.0000E+00	2.4290E+06
3.0967E+02	1.2354E+03	1.8546E+03	-	4.7004E+04	1.2443E+05	-	1.5358E+04	1.0948E+00
3.0967E+02	1.1792E+03	1.8046E+03	-	4.0289E+04	3.5368E+05	-	1.4828E+04	1.0625E-01
3.0967E+02	1.1231E+03	2.7734E+03	-	3.3575E+04	7.5307E+05	-	1.3769E+04	5.3125E-02
3.0967E+02	1.0669E+03	4.3808E+03	-	2.6860E+04	1.6944E+06	-	1.3239E+04	9.1891E-01
3.0967E+02	1.0108E+03	1.0798E+04	-	2.0145E+04	3.0360E+06	-	1.2710E+04	9.1891E-01
3.0967E+02	9.5460E+02	1.2379E+04	-	1.3430E+04	4.0242E+06	-	1.1651E+04	1.2448E+00
3.0967E+02	8.9845E+02	1.4062E+04	-	6.7149E+03	7.3369E+06	-	1.1121E+04	2.6717E+00
3.0967E+02	8.4230E+02	1.7240E+04	-	0.0000E+00	9.6212E+06	-	1.0062E+04	1.0625E-01
3.0967E+02	7.8614E+02	2.4505E+04	-	2.8203E+05	5.2085E+00	-	9.0027E+03	8.5826E-01
3.0967E+02	7.2999E+02	4.5955E+04	-	2.7531E+05	1.3359E+00	-	8.4731E+03	1.7551E+00
3.0967E+02	6.7384E+02	7.6188E+04	-	2.6860E+05	7.8802E+00	-	7.9436E+03	3.7162E+00
3.0967E+02	6.1768E+02	1.4761E+05	-	2.6188E+05	3.0859E+00	-	7.4140E+03	4.4429E+01
3.0967E+02	5.6153E+02	2.5378E+05	-	2.5517E+05	1.3359E+00	-	6.8844E+03	2.5498E+01
3.0967E+02	5.0538E+02	3.9494E+05	-	2.4845E+05	1.0295E+01	-	6.3549E+03	3.5090E+00
3.0967E+02	4.4922E+02	8.1834E+05	-	2.4174E+05	5.8335E+00	-	5.8253E+03	2.7414E+01
3.0967E+02	3.9307E+02	1.3153E+06	-	2.3502E+05	6.6506E+00	-	5.2957E+03	3.9424E+02
3.0967E+02	3.3692E+02	2.0087E+06	-	2.2831E+05	1.3359E+00	-	4.7661E+03	1.5925E+02
3.0967E+02	2.8077E+02	3.7544E+06	-	2.2159E+05	2.0971E+01	-	4.2366E+03	1.2185E+03
3.0967E+02	2.2461E+02	5.0845E+06	-	2.1488E+05	1.1029E+01	-	3.7070E+03	4.6892E+03
3.0967E+02	1.6846E+02	6.1123E+06	-	2.0816E+05	1.9327E+01	-	3.1774E+03	6.6662E+03
3.0967E+02	1.1231E+02	6.9502E+06	-	2.0145E+05	2.3909E+01	-	2.6479E+03	1.1219E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.0967E+02	5.6153E+01	1.0652E+07	-	1.9473E+05	5.0317E+00	-	2.1183E+03	3.2316E+04
3.0967E+02	0.0000E+00	2.9825E+07	-	1.8802E+05	2.4327E+01	-	1.5887E+03	3.8623E+04
2.4051E+02	2.7515E+03	5.3125E-02	-	1.8130E+05	1.0279E+01	-	1.0591E+03	1.1805E+05
2.4051E+02	2.5269E+03	1.8031E+00	-	1.7459E+05	4.0043E+00	-	5.2957E+02	2.2615E+05
2.4051E+02	2.4707E+03	8.9588E+00	-	1.6787E+05	3.2487E+00	-	0.0000E+00	7.6851E+05
2.4051E+02	2.4146E+03	1.8031E+00	-	1.6116E+05	5.1091E+01	-	1.7476E+04	6.2500E-01
2.4051E+02	2.3584E+03	1.8988E+01	-	1.5444E+05	1.6931E+02	-	1.4298E+04	5.3125E-02
2.4051E+02	2.3023E+03	1.8350E+01	-	1.4773E+05	1.4083E+02	-	1.3239E+04	5.3125E-02
2.4051E+02	2.2461E+03	7.6366E+00	-	1.4101E+05	1.4470E+02	-	1.0062E+04	1.0625E-01
2.4051E+02	2.1900E+03	8.6025E+00	-	1.3430E+05	2.5999E+02	-	9.5323E+03	5.8781E-01
2.4051E+02	2.1338E+03	1.6172E+01	-	1.2758E+05	2.6837E+02	-	9.0027E+03	1.0625E-01
2.4051E+02	2.0777E+03	8.7507E+00	-	1.2087E+05	7.2118E+02	-	8.4731E+03	1.0625E-01
2.4051E+02	2.0215E+03	6.7733E+00	-	1.1415E+05	3.5021E+02	-	7.9436E+03	5.1285E+01
2.4051E+02	1.9654E+03	2.4703E+01	-	1.0744E+05	5.3634E+03	-	7.4140E+03	9.9699E+00
2.4051E+02	1.9092E+03	4.7806E+01	-	1.0072E+05	1.8775E+03	-	6.8844E+03	6.4620E+00
2.4051E+02	1.8531E+03	6.4037E+00	-	9.4009E+04	4.2243E+03	-	6.3549E+03	1.7895E+01
2.4051E+02	1.7969E+03	2.0385E+00	-	8.7294E+04	4.2701E+03	-	5.8253E+03	2.0607E+01
2.4051E+02	1.7407E+03	5.7694E+01	-	8.0579E+04	4.5306E+03	-	5.2957E+03	2.0960E+02
2.4051E+02	1.6846E+03	2.1617E+01	-	7.3864E+04	1.0556E+04	-	4.7661E+03	9.7432E+01
2.4051E+02	1.6284E+03	5.6423E+00	-	6.7149E+04	2.7887E+04	-	4.2366E+03	1.3839E+03
2.4051E+02	1.5723E+03	1.1387E+02	-	6.0434E+04	3.4020E+04	-	3.7070E+03	4.7465E+02
2.4051E+02	1.5161E+03	6.3950E+01	-	5.3719E+04	6.6213E+04	-	3.1774E+03	4.5017E+02
2.4051E+02	1.4600E+03	7.3685E+01	-	4.7004E+04	1.2649E+05	-	2.6479E+03	1.1462E+02
2.4051E+02	1.4038E+03	1.3444E+02	-	4.0289E+04	3.6221E+05	-	2.1183E+03	2.0208E+03
2.4051E+02	1.3477E+03	3.3585E+02	-	3.3575E+04	8.6224E+05	-	1.5887E+03	2.9799E+03
2.4051E+02	1.2915E+03	4.8442E+02	-	2.6860E+04	1.5746E+06	-	1.0591E+03	1.8577E+04
2.4051E+02	1.2354E+03	2.1070E+02	-	2.0145E+04	2.8113E+06	-	5.2957E+02	1.0279E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.4051E+02	1.1792E+03	4.2477E+02	-	1.3430E+04	4.1602E+06	-	0.0000E+00	2.6598E+05
2.4051E+02	1.1231E+03	4.3800E+02	-	6.7149E+03	6.5165E+06	-	1.6946E+04	5.3125E-02
2.4051E+02	1.0669E+03	1.7720E+03	-	0.0000E+00	1.0195E+07	-	1.5358E+04	6.2500E-01
2.4051E+02	1.0108E+03	1.1703E+03	-	2.6188E+05	1.3359E+00	-	1.4298E+04	5.3125E-02
2.4051E+02	9.5460E+02	4.2519E+03	-	2.5517E+05	1.3359E+00	-	7.4140E+03	9.6312E-01
2.4051E+02	8.9845E+02	4.6442E+03	-	2.4845E+05	5.7576E+00	-	6.8844E+03	1.0585E+01
2.4051E+02	8.4230E+02	5.0423E+03	-	2.4174E+05	2.6717E+00	-	5.8253E+03	1.7080E+02
2.4051E+02	7.8614E+02	5.1590E+03	-	2.3502E+05	6.5443E+00	-	5.2957E+03	3.1091E+01
2.4051E+02	7.2999E+02	9.2152E+03	-	2.2831E+05	5.3679E+00	-	4.7661E+03	4.0361E+01
2.4051E+02	6.7384E+02	3.6602E+04	-	2.2159E+05	1.7183E+01	-	4.2366E+03	8.5200E+00
2.4051E+02	6.1768E+02	3.6219E+04	-	2.1488E+05	5.9159E+00	-	3.7070E+03	1.7711E+02
2.4051E+02	5.6153E+02	1.0927E+05	-	2.0816E+05	1.9545E+01	-	3.1774E+03	1.1281E+01
2.4051E+02	5.0538E+02	2.2800E+05	-	2.0145E+05	4.2618E+00	-	2.6479E+03	3.5435E+01
2.4051E+02	4.4922E+02	5.8602E+05	-	1.9473E+05	5.7861E+00	-	2.1183E+03	5.1352E+01
2.4051E+02	3.9307E+02	8.3978E+05	-	1.8802E+05	7.6761E+00	-	1.5887E+03	4.4352E+02
2.4051E+02	3.3692E+02	1.8559E+06	-	1.8130E+05	2.7577E+01	-	1.0591E+03	9.5661E+03
2.4051E+02	2.8077E+02	2.9913E+06	-	1.7459E+05	1.1210E+01	-	5.2957E+02	9.0625E+03
2.4051E+02	2.2461E+02	5.2277E+06	-	1.6787E+05	2.7760E+01	-	0.0000E+00	4.7236E+04
2.4051E+02	1.6846E+02	7.1620E+06	-	1.6116E+05	2.3776E+01	-	2.6479E+04	5.3125E-02
2.4051E+02	1.1231E+02	9.9432E+06	-	1.5444E+05	4.0923E+01	-	1.1121E+04	1.0625E-01
2.4051E+02	5.6153E+01	1.3135E+07	-	1.4773E+05	2.8772E+02	-	7.9436E+03	1.6672E+02
2.4051E+02	0.0000E+00	3.5634E+07	-	1.4101E+05	1.7068E+02	-	6.8844E+03	1.6079E+00
1.7136E+02	2.5269E+03	5.2616E+00	-	1.3430E+05	1.8258E+02	-	6.3549E+03	3.1319E+01
1.7136E+02	2.4146E+03	2.6717E+00	-	1.2758E+05	5.5483E+03	-	5.8253E+03	1.1123E+01
1.7136E+02	2.3023E+03	6.1717E+00	-	1.2087E+05	8.7953E+02	-	5.2957E+03	3.0282E+01
1.7136E+02	2.2461E+03	1.3890E+00	-	1.1415E+05	6.5729E+03	-	4.7661E+03	1.0625E-01
1.7136E+02	2.1900E+03	1.2632E+01	-	1.0744E+05	1.8471E+03	-	4.2366E+03	1.0625E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.7136E+02	2.1338E+03	5.3679E+00	-	1.0072E+05	5.9170E+03	-	3.7070E+03	5.4496E+00
1.7136E+02	2.0777E+03	2.4281E+00	-	9.4009E+04	1.9317E+04	-	3.1774E+03	2.5990E+01
1.7136E+02	2.0215E+03	2.7835E+01	-	8.7294E+04	3.3109E+04	-	2.6479E+03	4.7034E+01
1.7136E+02	1.9654E+03	2.4463E+01	-	8.0579E+04	2.5618E+04	-	2.1183E+03	9.6091E+01
1.7136E+02	1.9092E+03	3.2716E+01	-	7.3864E+04	3.3366E+04	-	1.5887E+03	3.6445E+02
1.7136E+02	1.8531E+03	3.1296E+01	-	6.7149E+04	2.8043E+04	-	1.0591E+03	2.3646E+01
1.7136E+02	1.7969E+03	2.2486E+00	-	6.0434E+04	3.4989E+04	-	5.2957E+02	3.6604E+02
1.7136E+02	1.7407E+03	3.1760E+00	-	5.3719E+04	8.2331E+04	-	0.0000E+00	4.9098E+03
1.7136E+02	1.6846E+03	1.6664E+01	-	4.7004E+04	9.2098E+04	-	8.4731E+03	1.0625E-01
1.7136E+02	1.6284E+03	3.1684E+01	-	4.0289E+04	2.7286E+05	-	6.3549E+03	9.4784E+00
1.7136E+02	1.5723E+03	3.1882E+01	-	3.3575E+04	6.2944E+05	-	5.8253E+03	1.4724E-01
1.7136E+02	1.5161E+03	4.2677E+01	-	2.6860E+04	1.5641E+06	-	5.2957E+03	1.2500E+00
1.7136E+02	1.4600E+03	6.6920E+01	-	2.0145E+04	2.9070E+06	-	4.7661E+03	2.8579E+00
1.7136E+02	1.4038E+03	8.0080E+01	-	1.3430E+04	4.9229E+06	-	4.2366E+03	4.9929E+00
1.7136E+02	1.3477E+03	9.8244E+01	-	6.7149E+03	6.9149E+06	-	3.7070E+03	1.0625E-01
1.7136E+02	1.2915E+03	1.3088E+02	-	0.0000E+00	1.1224E+07	-	3.1774E+03	1.1945E+01
1.7136E+02	1.2354E+03	1.0231E+02	-	2.6860E+05	1.3359E+00	-	2.6479E+03	9.3722E+00
1.7136E+02	1.1792E+03	1.9804E+02	-	2.5517E+05	2.6717E+00	-	2.1183E+03	1.2146E+01
1.7136E+02	1.1231E+03	2.1248E+02	-	2.4174E+05	2.6717E+00	-	1.5887E+03	3.2581E+01
1.7136E+02	1.0669E+03	2.2783E+02	-	2.3502E+05	4.0826E+00	-	1.0591E+03	2.0739E+00
1.7136E+02	1.0108E+03	1.2045E+03	-	2.2831E+05	2.8300E+00	-	5.2957E+02	3.7997E+02
1.7136E+02	9.5460E+02	7.0230E+02	-	2.2159E+05	4.0826E+00	-	0.0000E+00	2.4000E+02
1.7136E+02	8.9845E+02	2.4509E+03	-	2.1488E+05	2.0307E+00	-	2.3301E+04	5.3125E-02
1.7136E+02	8.4230E+02	3.3881E+03	-	2.0816E+05	6.3894E+00	-	9.5323E+03	1.0625E-01
1.7136E+02	7.8614E+02	7.9331E+03	-	2.0145E+05	1.5918E+01	-	9.0027E+03	1.0625E-01
1.7136E+02	7.2999E+02	2.1219E+04	-	1.9473E+05	1.5468E+01	-	5.8253E+03	8.5826E-01
1.7136E+02	6.7384E+02	2.8666E+04	-	1.8802E+05	2.5978E+01	-	4.7661E+05	1.0625E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.7136E+02	6.1768E+02	4.4457E+04	-	1.8130E+05	4.9978E+01	-	3.7070E+03	1.0055E+00
1.7136E+02	5.6153E+02	7.9273E+04	-	1.7459E+05	2.8320E+01	-	2.6479E+03	4.2818E+00
1.7136E+02	5.0538E+02	1.6991E+05	-	1.6787E+05	9.5820E+01	-	2.1183E+03	1.9603E+01
1.7136E+02	4.4922E+02	2.9782E+05	-	1.6116E+05	6.2099E+02	-	1.5887E+03	1.0972E+01
1.7136E+02	3.9307E+02	7.5850E+05	-	1.5444E+05	1.6043E+02	-	1.0591E+03	6.8659E+01
1.7136E+02	3.3692E+02	1.5315E+06	-	1.4773E+05	2.3670E+02	-	5.2957E+02	2.4708E+01
1.7136E+02	2.8077E+02	3.1787E+06	-	1.4101E+05	4.0462E+02	-	0.0000E+00	2.6415E+02
1.7136E+02	2.2461E+02	6.5333E+06	-	1.3430E+05	3.7333E+02	-	6.3549E+03	1.0625E-01
1.7136E+02	1.6846E+02	1.0875E+07	-	1.2758E+05	3.3235E+03	-	5.2957E+03	8.5826E-01
1.7136E+02	1.1231E+02	1.4025E+07	-	1.2087E+05	1.8477E+03	-	3.7070E+03	1.0625E-01
1.7136E+02	5.6153E+01	1.8676E+07	-	1.1415E+05	5.5093E+03	-	3.1774E+03	1.0055E+00
1.7136E+02	0.0000E+00	4.5735E+07	-	1.0744E+05	1.4192E+04	-	2.1183E+03	1.4724E-01
1.0220E+02	2.5830E+03	5.3125E-02	-	1.0072E+05	5.0725E+03	-	1.5887E+03	9.6451E-01
1.0220E+02	2.5269E+03	1.3890E+00	-	9.4009E+04	2.6884E+04	-	1.0591E+03	1.3507E+01
1.0220E+02	2.4707E+03	1.3359E+00	-	8.7294E+04	2.0859E+04	-	5.2957E+02	2.3989E+01
1.0220E+02	2.4146E+03	6.9585E+00	-	8.0579E+04	2.3380E+04	-	0.0000E+00	1.7862E+02
1.0220E+02	2.3584E+03	5.3125E-02	-	7.3864E+04	4.1159E+04	-	3.7070E+03	1.0625E-01
1.0220E+02	2.3023E+03	1.0625E-01	-	6.7149E+04	3.9387E+04	-	1.5887E+03	1.4724E-01
1.0220E+02	2.2461E+03	5.3125E-02	-	6.0434E+04	4.6334E+04	-	1.0591E+03	8.5826E-01
1.0220E+02	2.1900E+03	3.0859E+00	-	5.3719E+04	7.0432E+04	-	5.2957E+02	2.0500E+01
1.0220E+02	2.1338E+03	5.3125E-02	-	4.7004E+04	1.2740E+05	-	0.0000E+00	8.8275E+01
1.0220E+02	2.0777E+03	1.5754E+01	-	4.0289E+04	2.1848E+05	-	1.0591E+03	1.0625E-01
1.0220E+02	2.0215E+03	2.5875E+00	-	3.3575E+04	3.9981E+05	-	5.2957E+02	1.2500E+00
1.0220E+02	1.9654E+03	3.1875E-01	-	2.6860E+04	1.2775E+06	-	0.0000E+00	3.0480E+00
1.0220E+02	1.9092E+03	2.1250E-01	-	2.0145E+04	2.4188E+06	-	1.0591E+03	1.0625E-01
1.0220E+02	1.8531E+03	3.1646E+01	-	1.3430E+04	3.8825E+06	-	0.0000E+00	1.0549E+01
1.0220E+02	1.7969E+03	2.1250E-01	-	6.7149E+03	5.5131E+06	-	0.0000E+00	1.0549E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0220E+02	1.7407E+03	1.0576E+01	-	0.0000E+00	1.3485E+07			
1.0220E+02	1.6846E+03	1.0470E+01	6.8439E+04	2.3502E+05	1.3359E+00			
1.0220E+02	1.6284E+03	1.0576E+01	7.6460E+04	2.2159E+05	1.3359E+00			
1.0220E+02	1.5723E+03	4.0207E+01	7.6460E+04	2.1488E+05	4.8920E-01			
1.0220E+02	1.5161E+03	4.3788E+01	7.6460E+04	2.0816E+05	1.3359E+00			
1.0220E+02	1.4600E+03	3.2272E+01	7.6460E+04	2.0145E+05	1.0168E+01			
1.0220E+02	1.4038E+03	9.4019E+01	7.6460E+04	1.9473E+05	5.7500E+00			
1.0220E+02	1.3477E+03	7.4842E+01	7.6460E+04	1.8802E+05	2.3334E+01			
1.0220E+02	1.2915E+03	5.5455E+01	7.6460E+04	1.8130E+05	1.6738E+01			
1.0220E+02	1.2354E+03	1.1251E+02	7.6460E+04	1.7459E+05	1.0510E+01			
1.0220E+02	1.1792E+03	1.4562E+02	7.6460E+04	1.6787E+05	3.0793E+01			
1.0220E+02	1.1231E+03	1.0479E+02	7.6460E+04	1.6116E+05	1.6845E+02			
1.0220E+02	1.0669E+03	3.3248E+02	7.6460E+04	1.5444E+05	5.0622E+02			
1.0220E+02	1.0108E+03	2.7376E+02	7.6460E+04	1.4773E+05	3.1388E+02			
1.0220E+02	9.5460E+02	4.0341E+02	7.6460E+04	1.4101E+05	2.5576E+03			
1.0220E+02	8.9845E+02	5.5744E+02	7.6460E+04	1.3430E+05	1.0507E+03			
1.0220E+02	8.4230E+02	1.6548E+03	7.6460E+04	1.2758E+05	3.8363E+03			
1.0220E+02	7.8614E+02	5.4099E+03	7.6460E+04	1.2087E+05	4.8748E+03			
1.0220E+02	7.2999E+02	3.8382E+03	7.6460E+04	1.1415E+05	5.4553E+03			
1.0220E+02	6.7384E+02	1.2955E+04	7.6460E+04	1.0744E+05	9.0529E+03			
1.0220E+02	6.1768E+02	2.8025E+04	7.6460E+04	1.0072E+05	1.1159E+04			
1.0220E+02	5.6153E+02	3.7452E+04	7.6460E+04	9.4009E+04	1.0688E+04			
1.0220E+02	5.0538E+02	1.0001E+05	7.6460E+04	8.7294E+04	2.3868E+04			
1.0220E+02	4.4922E+02	2.4004E+05	7.6460E+04	8.0579E+04	4.7834E+04			
1.0220E+02	3.9307E+02	4.3990E+05	7.6460E+04	7.3864E+04	5.6266E+04			
1.0220E+02	3.3692E+02	9.9238E+05	7.6460E+04	6.7149E+04	8.8971E+04			
1.0220E+02	2.8077E+02	1.8328E+06	7.6460E+04	6.0434E+04	1.2623E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0220E+02	2.2461E+02	2.9361E+06	- 7.6460E+04	5.3719E+04	1.7278E+05			
1.0220E+02	1.6846E+02	4.8297E+06	- 7.6460E+04	4.7004E+04	2.9220E+05			
1.0220E+02	1.1231E+02	7.1427E+06	- 7.6460E+04	4.0289E+04	3.5612E+05			
1.0220E+02	5.6153E+01	1.0215E+07	- 7.6460E+04	3.3575E+04	6.0171E+05			
1.0220E+02	0.0000E+00	3.0687E+07	- 7.6460E+04	2.6860E+04	1.4070E+06			
3.3047E+01	2.8077E+03	6.2500E-01	- 7.6460E+04	2.0145E+04	3.0826E+06			
3.3047E+01	2.3584E+03	5.3125E-02	- 7.6460E+04	1.3430E+04	4.4961E+06			
3.3047E+01	2.3023E+03	3.0859E+00	- 7.6460E+04	6.7149E+03	5.7063E+06			
3.3047E+01	2.2461E+03	1.7500E+00	- 7.6460E+04	0.0000E+00	1.5977E+07			
3.3047E+01	2.1900E+03	1.4421E+00	- 8.4480E+04	2.1488E+05	2.8300E+00			
3.3047E+01	2.0777E+03	7.6230E+00	- 8.4480E+04	1.9473E+05	4.7773E+00			
3.3047E+01	1.9654E+03	5.3125E-02	- 8.4480E+04	1.8802E+05	1.9905E+02			
3.3047E+01	1.8531E+03	6.7298E-01	- 8.4480E+04	1.8130E+05	2.8278E+02			
3.3047E+01	1.7969E+03	1.0625E-01	- 8.4480E+04	1.7459E+05	2.1853E+01			
3.3047E+01	1.7407E+03	5.3125E-02	- 8.4480E+04	1.6787E+05	1.7076E+01			
3.3047E+01	1.6846E+03	5.3125E-02	- 8.4480E+04	1.6116E+05	1.5968E+02			
3.3047E+01	1.6284E+03	2.4281E+00	- 8.4480E+04	1.5444E+05	5.3918E+02			
3.3047E+01	1.5723E+03	1.0977E+01	- 8.4480E+04	1.4773E+05	6.6563E+02			
3.3047E+01	1.5161E+03	8.3750E-01	- 8.4480E+04	1.4101E+05	8.0847E+02			
3.3047E+01	1.4600E+03	2.4502E+01	- 8.4480E+04	1.3430E+05	4.0948E+03			
3.3047E+01	1.4038E+03	1.9094E+00	- 8.4480E+04	1.2758E+05	3.9973E+03			
3.3047E+01	1.3477E+03	7.9437E+00	- 8.4480E+04	1.2087E+05	5.6357E+03			
3.3047E+01	1.2915E+03	1.3117E+01	- 8.4480E+04	1.1415E+05	8.3620E+03			
3.3047E+01	1.2354E+03	1.7371E+01	- 8.4480E+04	1.0744E+05	1.5976E+04			
3.3047E+01	1.1792E+03	1.3735E+01	- 8.4480E+04	1.0072E+05	1.6871E+04			
3.3047E+01	1.1231E+03	2.7646E+01	- 8.4480E+04	9.4009E+04	2.1411E+04			
3.3047E+01	1.0669E+03	2.7173E+01	- 8.4480E+04	8.7294E+04	5.2843E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.3047E+01	1.0108E+03	1.9379E+01	- 8.4480E+04	8.0579E+04	7.9740E+04			
3.3047E+01	9.5460E+02	5.5725E+01	- 8.4480E+04	7.3864E+04	1.3425E+05			
3.3047E+01	8.9845E+02	7.3375E+01	- 8.4480E+04	6.7149E+04	2.2127E+05			
3.3047E+01	8.4230E+02	1.5768E+04	- 8.4480E+04	6.0434E+04	3.0374E+05			
3.3047E+01	7.8614E+02	6.0585E+03	- 8.4480E+04	5.3719E+04	4.2636E+05			
3.3047E+01	7.2999E+02	2.0991E+04	- 8.4480E+04	4.7004E+04	5.2691E+05			
3.3047E+01	6.7384E+02	6.0644E+04	- 8.4480E+04	4.0289E+04	7.3504E+05			
3.3047E+01	6.1768E+02	7.4658E+04	- 8.4480E+04	3.3575E+04	1.1420E+06			
3.3047E+01	5.6153E+02	9.5891E+04	- 8.4480E+04	2.6860E+04	1.8246E+06			
3.3047E+01	5.0538E+02	7.3164E+04	- 8.4480E+04	2.0145E+04	2.8655E+06			
3.3047E+01	4.4922E+02	8.8496E+04	- 8.4480E+04	1.3430E+04	3.9013E+06			
3.3047E+01	3.9307E+02	2.2359E+05	- 8.4480E+04	6.7149E+03	4.4999E+06			
3.3047E+01	3.3692E+02	4.1615E+05	- 8.4480E+04	0.0000E+00	1.3667E+07			
3.3047E+01	2.8077E+02	8.1262E+05	- 9.2501E+04	2.0145E+05	4.7773E+00			
3.3047E+01	2.2461E+02	1.5244E+06	- 9.2501E+04	1.9473E+05	4.7773E+00			
3.3047E+01	1.6846E+02	2.5615E+06	- 9.2501E+04	1.8802E+05	5.2170E+01			
3.3047E+01	1.1231E+02	4.7620E+06	- 9.2501E+04	1.7459E+05	1.7076E+01			
3.3047E+01	5.6153E+01	1.0011E+07	- 9.2501E+04	1.6787E+05	2.2998E+03			
3.3047E+01	0.0000E+00	2.7467E+07	- 9.2501E+04	1.6116E+05	2.0634E+03			
- 3.6108E+01	2.5830E+03	1.7500E+00	- 9.2501E+04	1.5444E+05	4.0216E+02			
- 3.6108E+01	2.5269E+03	1.3359E+00	- 9.2501E+04	1.4773E+05	9.2661E+02			
- 3.6108E+01	2.3023E+03	1.0625E-01	- 9.2501E+04	1.4101E+05	1.2892E+03			
- 3.6108E+01	2.1900E+03	5.3125E-02	- 9.2501E+04	1.3430E+05	1.3994E+03			
- 3.6108E+01	1.8531E+03	1.7500E+00	- 9.2501E+04	1.2758E+05	9.4799E+03			
- 3.6108E+01	1.6846E+03	5.3125E-02	- 9.2501E+04	1.2087E+05	1.0630E+04			
- 3.6108E+01	1.6284E+03	5.3125E-02	- 9.2501E+04	1.1415E+05	1.3897E+04			
- 3.6108E+01	1.5723E+03	1.0625E-01	- 9.2501E+04	1.0744E+05	1.4963E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.6108E+01	1.5161E+03	1.5156E+00	9.2501E+04	1.0072E+05	3.5197E+04			
-			-					
3.6108E+01	1.4600E+03	1.5867E+00	9.2501E+04	9.4009E+04	5.6304E+04			
-			-					
3.6108E+01	1.4038E+03	2.9061E+00	9.2501E+04	8.7294E+04	9.3359E+04			
-			-					
3.6108E+01	1.3477E+03	6.4363E+00	9.2501E+04	8.0579E+04	1.6029E+05			
-			-					
3.6108E+01	1.2915E+03	7.7353E+00	9.2501E+04	7.3864E+04	2.4878E+05			
-			-					
3.6108E+01	1.2354E+03	2.0292E+01	9.2501E+04	6.7149E+04	3.5189E+05			
-			-					
3.6108E+01	1.1792E+03	5.6733E+00	9.2501E+04	6.0434E+04	5.1652E+05			
-			-					
3.6108E+01	1.1231E+03	1.1248E+01	9.2501E+04	5.3719E+04	8.2960E+05			
-			-					
3.6108E+01	1.0669E+03	4.0606E+01	9.2501E+04	4.7004E+04	1.1990E+06			
-			-					
3.6108E+01	1.0108E+03	7.0891E+01	9.2501E+04	4.0289E+04	1.5403E+06			
-			-					
3.6108E+01	9.5460E+02	5.3245E+01	9.2501E+04	3.3575E+04	2.1446E+06			
-			-					
3.6108E+01	8.9845E+02	9.7958E+01	9.2501E+04	2.6860E+04	2.8263E+06			
-			-					
3.6108E+01	8.4230E+02	1.0489E+04	9.2501E+04	2.0145E+04	2.9328E+06			
-			-					
3.6108E+01	7.8614E+02	5.3483E+03	9.2501E+04	1.3430E+04	3.2103E+06			
-			-					
3.6108E+01	7.2999E+02	1.5673E+04	9.2501E+04	6.7149E+03	3.5978E+06			
-			-					
3.6108E+01	6.7384E+02	2.0971E+04	9.2501E+04	0.0000E+00	1.1266E+07			
-			-					
3.6108E+01	6.1768E+02	2.7610E+04	1.0052E+05	1.7459E+05	4.7773E+00			
-			-					
3.6108E+01	5.6153E+02	1.1413E+05	1.0052E+05	1.6787E+05	2.7963E+02			
-			-					
3.6108E+01	5.0538E+02	7.4320E+04	1.0052E+05	1.6116E+05	6.8027E+02			
-			-					
3.6108E+01	4.4922E+02	8.6787E+04	1.0052E+05	1.5444E+05	2.8101E+02			
-			-					
3.6108E+01	3.9307E+02	1.1850E+05	1.0052E+05	1.4773E+05	3.8547E+03			
-			-					
3.6108E+01	3.3692E+02	1.4663E+05	1.0052E+05	1.4101E+05	7.9772E+03			
-			-					
3.6108E+01	2.8077E+02	1.7589E+05	1.0052E+05	1.3430E+05	6.1788E+03			
-			-					
3.6108E+01	2.2461E+02	4.6313E+05	1.0052E+05	1.2758E+05	1.1001E+04			
-			-					
3.6108E+01	1.6846E+02	1.1688E+06	1.0052E+05	1.2087E+05	1.0670E+04			
-			-					
3.6108E+01	1.1231E+02	2.4811E+06	1.0052E+05	1.1415E+05	2.3207E+04			
-			-					
3.6108E+01	5.6153E+01	6.3277E+06	1.0052E+05	1.0744E+05	3.5069E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.6108E+01	0.0000E+00	1.3942E+07	1.0052E+05	1.0072E+05	5.3171E+04			
-			-					
1.0526E+02	2.5830E+03	1.3359E+00	1.0052E+05	9.4009E+04	9.7291E+04			
-			-					
1.0526E+02	2.0215E+03	1.7500E+00	1.0052E+05	8.7294E+04	1.4908E+05			
-			-					
1.0526E+02	1.8531E+03	1.7500E+00	1.0052E+05	8.0579E+04	2.2014E+05			
-			-					
1.0526E+02	1.7407E+03	5.3125E-02	1.0052E+05	7.3864E+04	2.4532E+05			
-			-					
1.0526E+02	1.6846E+03	1.8031E+00	1.0052E+05	6.7149E+04	4.8605E+05			
-			-					
1.0526E+02	1.5723E+03	2.8842E+00	1.0052E+05	6.0434E+04	8.0165E+05			
-			-					
1.0526E+02	1.5161E+03	3.7640E+00	1.0052E+05	5.3719E+04	1.2860E+06			
-			-					
1.0526E+02	1.4600E+03	1.8563E+00	1.0052E+05	4.7004E+04	2.0442E+06			
-			-					
1.0526E+02	1.4038E+03	6.1390E+00	1.0052E+05	4.0289E+04	2.4751E+06			
-			-					
1.0526E+02	1.3477E+03	9.2998E+00	1.0052E+05	3.3575E+04	3.5812E+06			
-			-					
1.0526E+02	1.2915E+03	9.2245E+00	1.0052E+05	2.6860E+04	3.9496E+06			
-			-					
1.0526E+02	1.2354E+03	1.0456E+01	1.0052E+05	2.0145E+04	4.0953E+06			
-			-					
1.0526E+02	1.1792E+03	1.3192E+01	1.0052E+05	1.3430E+04	3.9869E+06			
-			-					
1.0526E+02	1.1231E+03	2.9052E+01	1.0052E+05	6.7149E+03	4.0880E+06			
-			-					
1.0526E+02	1.0669E+03	5.2691E+01	1.0052E+05	0.0000E+00	1.0911E+07			
-			-					
1.0526E+02	1.0108E+03	1.8655E+01	1.0854E+05	1.8130E+05	1.5125E+02			
-			-					
1.0526E+02	9.5460E+02	6.8542E+01	1.0854E+05	1.6787E+05	1.2299E+01			
-			-					
1.0526E+02	8.9845E+02	3.9035E+01	1.0854E+05	1.6116E+05	5.8396E+02			
-			-					
1.0526E+02	8.4230E+02	1.0707E+02	1.0854E+05	1.5444E+05	8.3243E+02			
-			-					
1.0526E+02	7.8614E+02	9.4298E+01	1.0854E+05	1.4773E+05	1.5832E+03			
-			-					
1.0526E+02	7.2999E+02	1.5345E+02	1.0854E+05	1.4101E+05	6.4477E+03			
-			-					
1.0526E+02	6.7384E+02	1.3521E+02	1.0854E+05	1.3430E+05	7.9609E+03			
-			-					
1.0526E+02	6.1768E+02	1.5905E+02	1.0854E+05	1.2758E+05	1.3818E+04			
-			-					
1.0526E+02	5.6153E+02	1.8265E+02	1.0854E+05	1.2087E+05	1.8864E+04			
-			-					
1.0526E+02	5.0538E+02	3.3813E+02	1.0854E+05	1.1415E+05	1.8353E+04			
-			-					
1.0526E+02	4.4922E+02	2.0931E+03	1.0854E+05	1.0744E+05	5.4210E+04			



Document:
0122-8671 VER 00

Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90A

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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
1.0526E+02	3.9307E+02	2.0898E+03	1.0854E+05	1.0072E+05	5.6557E+04			
-			-					
1.0526E+02	3.3692E+02	7.4774E+03	1.0854E+05	9.4009E+04	8.9318E+04			
-			-					
1.0526E+02	2.8077E+02	9.5533E+03	1.0854E+05	8.7294E+04	1.2011E+05			
-			-					
1.0526E+02	2.2461E+02	1.4956E+04	1.0854E+05	8.0579E+04	2.7528E+05			
-			-					
1.0526E+02	1.6846E+02	1.5964E+04	1.0854E+05	7.3864E+04	4.4377E+05			
-			-					
1.0526E+02	1.1231E+02	2.7800E+05	1.0854E+05	6.7149E+04	6.6683E+05			
-			-					
1.0526E+02	5.6153E+01	5.6079E+05	1.0854E+05	6.0434E+04	1.0279E+06			
-			-					
1.0526E+02	0.0000E+00	1.3941E+06	1.0854E+05	5.3719E+04	1.4990E+06			
-			-					
1.7442E+02	1.9092E+03	5.3125E-02	1.0854E+05	4.7004E+04	2.2899E+06			
-			-					
1.7442E+02	1.8531E+03	1.7500E+00	1.0854E+05	4.0289E+04	3.0672E+06			
-			-					
1.7442E+02	1.7969E+03	1.0625E-01	1.0854E+05	3.3575E+04	4.3181E+06			
-			-					
1.7442E+02	1.7407E+03	1.3359E+00	1.0854E+05	2.6860E+04	5.2033E+06			
-			-					
1.7442E+02	1.6284E+03	1.3359E+00	1.0854E+05	2.0145E+04	5.2678E+06			
-			-					
1.7442E+02	1.5723E+03	1.3359E+00	1.0854E+05	1.3430E+04	4.4747E+06			
-			-					
1.7442E+02	1.5161E+03	4.7500E+00	1.0854E+05	6.7149E+03	4.2788E+06			
-			-					
1.7442E+02	1.4600E+03	6.2500E-01	1.0854E+05	0.0000E+00	1.2638E+07			
-			-					
1.7442E+02	1.4038E+03	9.5838E+00	1.1656E+05	1.8130E+05	2.7993E+01			
-			-					
1.7442E+02	1.3477E+03	3.1390E+00	1.1656E+05	1.7459E+05	7.7457E+02			
-			-					
1.7442E+02	1.2915E+03	1.1633E+01	1.1656E+05	1.6787E+05	2.7993E+01			
-			-					
1.7442E+02	1.2354E+03	2.7629E+01	1.1656E+05	1.6116E+05	3.9810E+02			
-			-					
1.7442E+02	1.1792E+03	1.5012E+01	1.1656E+05	1.5444E+05	2.4673E+03			
-			-					
1.7442E+02	1.1231E+03	7.9217E+00	1.1656E+05	1.4773E+05	1.4518E+03			
-			-					
1.7442E+02	1.0669E+03	1.5442E+01	1.1656E+05	1.4101E+05	7.2352E+03			
-			-					
1.7442E+02	1.0108E+03	3.3052E+01	1.1656E+05	1.3430E+05	5.2650E+03			
-			-					
1.7442E+02	9.5460E+02	2.7917E+01	1.1656E+05	1.2758E+05	1.0824E+04			
-			-					
1.7442E+02	8.9845E+02	2.4606E+01	1.1656E+05	1.2087E+05	1.8031E+04			
-			-					
1.7442E+02	8.4230E+02	4.6831E+01	1.1656E+05	1.1415E+05	4.4462E+04			



DNV Denmark A/S
Tuborg Parkvej 8, 2.
DK-2900 Hellerup
VAT No. DK9832314

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
1.7442E+02	7.8614E+02	4.6850E+01	1.1656E+05	1.0744E+05	5.5858E+04			
-			-					
1.7442E+02	7.2999E+02	5.2889E+01	1.1656E+05	1.0072E+05	4.4707E+04			
-			-					
1.7442E+02	6.7384E+02	3.0478E+01	1.1656E+05	9.4009E+04	1.6905E+05			
-			-					
1.7442E+02	6.1768E+02	1.2150E+02	1.1656E+05	8.7294E+04	1.6555E+05			
-			-					
1.7442E+02	5.6153E+02	8.2669E+01	1.1656E+05	8.0579E+04	2.4465E+05			
-			-					
1.7442E+02	5.0538E+02	1.0756E+02	1.1656E+05	7.3864E+04	4.2838E+05			
-			-					
1.7442E+02	4.4922E+02	2.0486E+02	1.1656E+05	6.7149E+04	6.6972E+05			
-			-					
1.7442E+02	3.9307E+02	1.5470E+02	1.1656E+05	6.0434E+04	1.0309E+06			
-			-					
1.7442E+02	3.3692E+02	3.5157E+03	1.1656E+05	5.3719E+04	1.6323E+06			
-			-					
1.7442E+02	2.8077E+02	4.2876E+02	1.1656E+05	4.7004E+04	2.6999E+06			
-			-					
1.7442E+02	2.2461E+02	1.0574E+04	1.1656E+05	4.0289E+04	3.8558E+06			
-			-					
1.7442E+02	1.6846E+02	5.9011E+04	1.1656E+05	3.3575E+04	4.9199E+06			
-			-					
1.7442E+02	1.1231E+02	5.5944E+04	1.1656E+05	2.6860E+04	5.9302E+06			
-			-					
1.7442E+02	5.6153E+01	1.1896E+05	1.1656E+05	2.0145E+04	6.1568E+06			
-			-					
1.7442E+02	0.0000E+00	3.6999E+05	1.1656E+05	1.3430E+04	5.5167E+06			
-			-					
2.4357E+02	1.6846E+03	1.7500E+00	1.1656E+05	6.7149E+03	5.0149E+06			
-			-					
2.4357E+02	1.5161E+03	2.6717E+00	1.1656E+05	0.0000E+00	1.4989E+07			
-			-					
2.4357E+02	1.4600E+03	4.4217E+00	1.2458E+05	1.6116E+05	2.7993E+01			
-			-					
2.4357E+02	1.4038E+03	2.6717E+00	1.2458E+05	1.5444E+05	3.6183E+02			
-			-					
2.4357E+02	1.3477E+03	5.8107E+00	1.2458E+05	1.4773E+05	1.1230E+02			
-			-					
2.4357E+02	1.2915E+03	1.0709E+01	1.2458E+05	1.4101E+05	3.1513E+03			
-			-					
2.4357E+02	1.2354E+03	6.7452E+00	1.2458E+05	1.3430E+05	7.0348E+03			
-			-					
2.4357E+02	1.1792E+03	1.0086E+01	1.2458E+05	1.2758E+05	8.6745E+03			
-			-					
2.4357E+02	1.1231E+03	1.6457E+01	1.2458E+05	1.2087E+05	1.3322E+04			
-			-					
2.4357E+02	1.0669E+03	4.9421E+00	1.2458E+05	1.1415E+05	4.0346E+04			
-			-					
2.4357E+02	1.0108E+03	1.0086E+01	1.2458E+05	1.0744E+05	6.5109E+04			
-			-					
2.4357E+02	9.5460E+02	1.8563E+00	1.2458E+05	1.0072E+05	8.2386E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.4357E+02	8.9845E+02	1.2045E+01	1.2458E+05	9.4009E+04	1.4580E+05			
-			-					
2.4357E+02	8.4230E+02	1.0086E+01	1.2458E+05	8.7294E+04	2.0928E+05			
-			-					
2.4357E+02	7.8614E+02	4.8358E+00	1.2458E+05	8.0579E+04	3.4019E+05			
-			-					
2.4357E+02	7.2999E+02	1.4843E+01	1.2458E+05	7.3864E+04	5.0198E+05			
-			-					
2.4357E+02	6.7384E+02	1.5121E+01	1.2458E+05	6.7149E+04	9.5357E+05			
-			-					
2.4357E+02	6.1768E+02	1.1028E+01	1.2458E+05	6.0434E+04	1.3230E+06			
-			-					
2.4357E+02	5.6153E+02	3.2156E+01	1.2458E+05	5.3719E+04	2.1111E+06			
-			-					
2.4357E+02	5.0538E+02	2.8797E+01	1.2458E+05	4.7004E+04	3.2454E+06			
-			-					
2.4357E+02	4.4922E+02	2.7172E+01	1.2458E+05	4.0289E+04	4.5327E+06			
-			-					
2.4357E+02	3.9307E+02	5.9640E+01	1.2458E+05	3.3575E+04	6.1917E+06			
-			-					
2.4357E+02	3.3692E+02	6.0213E+01	1.2458E+05	2.6860E+04	7.2243E+06			
-			-					
2.4357E+02	2.8077E+02	5.3899E+01	1.2458E+05	2.0145E+04	7.2772E+06			
-			-					
2.4357E+02	2.2461E+02	1.3103E+02	1.2458E+05	1.3430E+04	6.5842E+06			
-			-					
2.4357E+02	1.6846E+02	1.0383E+04	1.2458E+05	6.7149E+03	5.6233E+06			
-			-					
2.4357E+02	1.1231E+02	2.2144E+02	1.2458E+05	0.0000E+00	1.6925E+07			
-			-					
2.4357E+02	5.6153E+01	3.2049E+04	1.3260E+05	1.4773E+05	3.8983E+02			
-			-					
2.4357E+02	0.0000E+00	1.2718E+05	1.3260E+05	1.4101E+05	6.9242E+02			
-			-					
3.1273E+02	2.0777E+03	6.2500E-01	1.3260E+05	1.3430E+05	1.4109E+03			
-			-					
3.1273E+02	1.6284E+03	1.3359E+00	1.3260E+05	1.2758E+05	3.0962E+03			
-			-					
3.1273E+02	1.5723E+03	1.3359E+00	1.3260E+05	1.2087E+05	9.0766E+03			
-			-					
3.1273E+02	1.4600E+03	1.3359E+00	1.3260E+05	1.1415E+05	1.7266E+04			
-			-					
3.1273E+02	1.4038E+03	1.7500E+00	1.3260E+05	1.0744E+05	1.5037E+04			
-			-					
3.1273E+02	1.3477E+03	5.7576E+00	1.3260E+05	1.0072E+05	6.8005E+04			
-			-					
3.1273E+02	1.2915E+03	4.4217E+00	1.3260E+05	9.4009E+04	8.0645E+04			
-			-					
3.1273E+02	1.1792E+03	5.3562E+00	1.3260E+05	8.7294E+04	1.5877E+05			
-			-					
3.1273E+02	1.1231E+03	1.2500E+00	1.3260E+05	8.0579E+04	2.7457E+05			
-			-					
3.1273E+02	1.0669E+03	1.7500E+00	1.3260E+05	7.3864E+04	5.3180E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.1273E+02	1.0108E+03	1.7500E+00	1.3260E+05	6.7149E+04	8.3314E+05			
-			-					
3.1273E+02	9.5460E+02	3.5000E+00	1.3260E+05	6.0434E+04	1.3710E+06			
-			-					
3.1273E+02	8.9845E+02	8.2500E+00	1.3260E+05	5.3719E+04	2.3329E+06			
-			-					
3.1273E+02	8.4230E+02	4.7500E+00	1.3260E+05	4.7004E+04	3.6187E+06			
-			-					
3.1273E+02	7.8614E+02	9.6717E+00	1.3260E+05	4.0289E+04	5.2119E+06			
-			-					
3.1273E+02	7.2999E+02	7.0000E+00	1.3260E+05	3.3575E+04	7.1188E+06			
-			-					
3.1273E+02	6.7384E+02	1.4528E+01	1.3260E+05	2.6860E+04	8.6115E+06			
-			-					
3.1273E+02	6.1768E+02	1.7922E+01	1.3260E+05	2.0145E+04	8.4973E+06			
-			-					
3.1273E+02	5.6153E+02	1.2343E+01	1.3260E+05	1.3430E+04	7.6588E+06			
-			-					
3.1273E+02	5.0538E+02	3.5145E+01	1.3260E+05	6.7149E+03	6.7041E+06			
-			-					
3.1273E+02	4.4922E+02	2.2121E+01	1.3260E+05	0.0000E+00	1.9149E+07			
-			-					
3.1273E+02	3.9307E+02	3.5104E+01	1.4063E+05	1.5444E+05	7.9220E+01			
-			-					
3.1273E+02	3.3692E+02	2.1821E+01	1.4063E+05	1.4101E+05	1.0721E+02			
-			-					
3.1273E+02	2.8077E+02	2.8293E+01	1.4063E+05	1.3430E+05	1.4251E+03			
-			-					
3.1273E+02	2.2461E+02	2.0996E+01	1.4063E+05	1.2758E+05	1.1517E+03			
-			-					
3.1273E+02	1.6846E+02	5.0753E+01	1.4063E+05	1.2087E+05	3.9025E+02			
-			-					
3.1273E+02	1.1231E+02	8.8524E+01	1.4063E+05	1.1415E+05	2.3318E+03			
-			-					
3.1273E+02	5.6153E+01	2.0111E+02	1.4063E+05	1.0744E+05	7.7786E+03			
-			-					
3.1273E+02	0.0000E+00	9.4049E+04	1.4063E+05	1.0072E+05	2.2140E+04			
-			-					
3.8188E+02	2.0215E+03	1.3359E+00	1.4063E+05	9.4009E+04	3.0177E+04			
-			-					
3.8188E+02	1.7407E+03	1.3359E+00	1.4063E+05	8.7294E+04	3.3574E+04			
-			-					
3.8188E+02	1.4600E+03	1.3359E+00	1.4063E+05	8.0579E+04	7.8158E+04			
-			-					
3.8188E+02	1.4038E+03	1.7500E+00	1.4063E+05	7.3864E+04	1.9818E+05			
-			-					
3.8188E+02	1.3477E+03	1.3359E+00	1.4063E+05	6.7149E+04	2.6670E+05			
-			-					
3.8188E+02	1.2354E+03	3.0859E+00	1.4063E+05	6.0434E+04	6.9354E+05			
-			-					
3.8188E+02	1.1792E+03	1.7500E+00	1.4063E+05	5.3719E+04	1.0282E+06			
-			-					
3.8188E+02	1.1231E+03	6.1717E+00	1.4063E+05	4.7004E+04	2.0686E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.8188E+02	8.9845E+02	3.9217E+00	1.4063E+05	4.0289E+04	2.8822E+06			
-			-					
3.8188E+02	7.8614E+02	7.0000E+00	1.4063E+05	3.3575E+04	4.2924E+06			
-			-					
3.8188E+02	7.2999E+02	7.1062E+00	1.4063E+05	2.6860E+04	5.3993E+06			
-			-					
3.8188E+02	6.1768E+02	1.3172E+01	1.4063E+05	2.0145E+04	6.1924E+06			
-			-					
3.8188E+02	5.6153E+02	1.3700E+01	1.4063E+05	1.3430E+04	5.1661E+06			
-			-					
3.8188E+02	5.0538E+02	9.6717E+00	1.4063E+05	6.7149E+03	5.0136E+06			
-			-					
3.8188E+02	4.4922E+02	1.5950E+01	1.4063E+05	0.0000E+00	1.4796E+07			
-			-					
3.8188E+02	3.9307E+02	7.2125E+00	1.4865E+05	1.4773E+05	7.9220E+01			
-			-					
3.8188E+02	3.3692E+02	1.4293E+01	1.4865E+05	1.2087E+05	1.0235E+03			
-			-					
3.8188E+02	2.8077E+02	3.3447E+01	1.4865E+05	1.1415E+05	2.9122E+03			
-			-					
3.8188E+02	2.2461E+02	1.8515E+01	1.4865E+05	1.0744E+05	1.5844E+02			
-			-					
3.8188E+02	1.6846E+02	4.1953E+01	1.4865E+05	1.0072E+05	5.3296E+03			
-			-					
3.8188E+02	1.1231E+02	5.4443E+01	1.4865E+05	9.4009E+04	6.7311E+03			
-			-					
3.8188E+02	5.6153E+01	1.2041E+02	1.4865E+05	8.7294E+04	6.3701E+03			
-			-					
3.8188E+02	0.0000E+00	6.2378E+02	1.4865E+05	8.0579E+04	2.1552E+04			
-			-					
4.5104E+02	1.6284E+03	1.7500E+00	1.4865E+05	7.3864E+04	2.6185E+04			
-			-					
4.5104E+02	1.3477E+03	2.6717E+00	1.4865E+05	6.7149E+04	7.8073E+04			
-			-					
4.5104E+02	1.2354E+03	3.5000E+00	1.4865E+05	6.0434E+04	1.4264E+05			
-			-					
4.5104E+02	1.0669E+03	3.5000E+00	1.4865E+05	5.3719E+04	3.4843E+05			
-			-					
4.5104E+02	8.9845E+02	4.7500E+00	1.4865E+05	4.7004E+04	6.1173E+05			
-			-					
4.5104E+02	8.4230E+02	3.5000E+00	1.4865E+05	4.0289E+04	9.0501E+05			
-			-					
4.5104E+02	7.8614E+02	4.7500E+00	1.4865E+05	3.3575E+04	1.4408E+06			
-			-					
4.5104E+02	7.2999E+02	1.3917E+01	1.4865E+05	2.6860E+04	2.1837E+06			
-			-					
4.5104E+02	6.7384E+02	8.8434E+00	1.4865E+05	2.0145E+04	2.2869E+06			
-			-					
4.5104E+02	6.1768E+02	1.2500E+00	1.4865E+05	1.3430E+04	1.9767E+06			
-			-					
4.5104E+02	5.6153E+02	7.4217E+00	1.4865E+05	6.7149E+03	2.1290E+06			
-			-					
4.5104E+02	5.0538E+02	3.5000E+00	1.4865E+05	0.0000E+00	7.3823E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
4.5104E+02	4.4922E+02	2.5432E+01	1.5667E+05	8.0579E+04	1.7862E+03			
-			-					
4.5104E+02	3.9307E+02	1.2343E+01	1.5667E+05	7.3864E+04	2.0009E+03			
-			-					
4.5104E+02	3.3692E+02	8.8434E+00	1.5667E+05	6.7149E+04	4.6780E+03			
-			-					
4.5104E+02	2.8077E+02	2.9308E+01	1.5667E+05	6.0434E+04	9.3741E+03			
-			-					
4.5104E+02	2.2461E+02	1.4293E+01	1.5667E+05	5.3719E+04	3.1278E+04			
-			-					
4.5104E+02	1.6846E+02	3.7988E+01	1.5667E+05	4.7004E+04	6.4750E+04			
-			-					
4.5104E+02	1.1231E+02	5.1474E+01	1.5667E+05	4.0289E+04	1.2124E+05			
-			-					
4.5104E+02	5.6153E+01	8.1750E+01	1.5667E+05	3.3575E+04	2.2881E+05			
-			-					
4.5104E+02	0.0000E+00	1.5790E+02	1.5667E+05	2.6860E+04	3.2105E+05			
-			-					
5.2020E+02	1.5723E+03	1.2500E+00	1.5667E+05	2.0145E+04	4.3221E+05			
-			-					
5.2020E+02	8.9845E+02	2.6717E+00	1.5667E+05	1.3430E+04	3.5234E+05			
-			-					
5.2020E+02	6.1768E+02	3.5000E+00	1.5667E+05	6.7149E+03	4.5961E+05			
-			-					
5.2020E+02	5.6153E+02	2.4417E+01	1.5667E+05	0.0000E+00	2.2110E+06			
-			-					
5.2020E+02	5.0538E+02	3.5000E+00	1.6469E+05	7.3864E+04	6.1137E+02			
-			-					
5.2020E+02	4.4922E+02	8.8434E+00	1.6469E+05	6.7149E+04	6.1137E+02			
-			-					
5.2020E+02	3.9307E+02	9.6717E+00	1.6469E+05	6.0434E+04	6.1137E+02			
-			-					
5.2020E+02	3.3692E+02	1.5437E+01	1.6469E+05	5.3719E+04	2.6717E+00			
-			-					
5.2020E+02	2.8077E+02	2.0195E+01	1.6469E+05	4.7004E+04	7.3302E+02			
-			-					
5.2020E+02	2.2461E+02	1.2343E+01	1.6469E+05	4.0289E+04	5.8038E+03			
-			-					
5.2020E+02	1.6846E+02	2.6260E+01	1.6469E+05	3.3575E+04	1.1415E+04			
-			-					
5.2020E+02	1.1231E+02	3.9477E+01	1.6469E+05	2.6860E+04	1.2763E+04			
-			-					
5.2020E+02	5.6153E+01	7.6691E+01	1.6469E+05	2.0145E+04	1.0706E+04			
-			-					
5.2020E+02	0.0000E+00	8.4392E+01	1.6469E+05	1.3430E+04	2.1257E+04			
-			-					
5.8935E+02	9.5460E+02	3.5000E+00	1.6469E+05	6.7149E+03	4.9160E+04			
-			-					
5.8935E+02	7.8614E+02	3.5000E+00	1.6469E+05	0.0000E+00	4.2028E+05			
-			-					
5.8935E+02	7.2999E+02	3.5000E+00	1.7271E+05	5.3719E+04	5.5986E+01			
-			-					
5.8935E+02	6.7384E+02	5.3434E+00	1.7271E+05	3.3575E+04	5.3434E+00			



Document:
0122-8671 VER 00Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90APage
182/282**Markov Matrices**

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
5.8935E+02	6.1768E+02	2.6717E+00	1.7271E+05	2.6860E+04	5.5986E+01			
-			-					
5.8935E+02	5.0538E+02	3.5000E+00	1.7271E+05	2.0145E+04	6.1671E+02			
-			-					
5.8935E+02	4.4922E+02	2.6717E+00	1.7271E+05	1.3430E+04	1.0687E+01			
-			-					
5.8935E+02	3.3692E+02	2.6717E+00	1.7271E+05	6.7149E+03	2.1239E+01			
-			-					
5.8935E+02	2.8077E+02	5.3434E+00	1.7271E+05	0.0000E+00	2.3414E+04			
-			-					
5.8935E+02	2.2461E+02	8.1214E+00	1.8073E+05	2.0145E+04	2.6717E+00			
-			-					
5.8935E+02	1.6846E+02	2.8842E+00	1.8073E+05	6.7149E+03	2.6717E+00			
-			-					
5.8935E+02	1.1231E+02	3.8069E+01	1.8073E+05	0.0000E+00	2.5891E+03			
-			-					
5.8935E+02	5.6153E+01	6.6596E+01	1.8875E+05	0.0000E+00	5.3434E+00			
-								
5.8935E+02	0.0000E+00	8.5494E+01						
-								
6.5851E+02	4.4922E+02	2.6717E+00						
-								
6.5851E+02	3.9307E+02	2.6717E+00						
-								
6.5851E+02	3.3692E+02	2.6717E+00						
-								
6.5851E+02	2.8077E+02	2.7780E+00						
-								
6.5851E+02	1.6846E+02	8.1214E+00						
-								
6.5851E+02	1.1231E+02	3.3124E+01						
-								
6.5851E+02	5.6153E+01	2.4808E+01						
-								
6.5851E+02	0.0000E+00	3.4048E+01						
-								
7.2766E+02	5.0538E+02	2.6717E+00						
-								
7.2766E+02	4.4922E+02	2.6717E+00						
-								
7.2766E+02	3.3692E+02	2.6717E+00						
-								
7.2766E+02	2.8077E+02	8.1214E+00						
-								
7.2766E+02	2.2461E+02	2.6717E+00						
-								
7.2766E+02	1.6846E+02	6.2779E+00						
-								
7.2766E+02	1.1231E+02	8.8434E+00						
-								
7.2766E+02	5.6153E+01	2.6895E+01						
-								
7.2766E+02	0.0000E+00	3.0162E+01						



DNV Denmark A/S
Tuborg Parkvej 8, 2.
DK-2900 Hellerup
VAT No. DK9832314

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
- 7.9682E+02	2.2461E+02	2.6717E+00						
- 7.9682E+02	1.6846E+02	2.6717E+00						
- 7.9682E+02	1.1231E+02	5.3434E+00						
- 7.9682E+02	5.6153E+01	1.2343E+01						
- 7.9682E+02	0.0000E+00	2.4329E+01						
- 8.6597E+02	2.2461E+02	2.6717E+00						
- 8.6597E+02	1.1231E+02	8.0151E+00						
- 8.6597E+02	5.6153E+01	2.6717E+00						
- 8.6597E+02	0.0000E+00	2.1250E-01						
- 9.3513E+02	5.0538E+02	2.6717E+00						
- 9.3513E+02	1.1231E+02	2.6717E+00						
- 9.3513E+02	5.6153E+01	2.6717E+00						
- 9.3513E+02	0.0000E+00	1.2343E+01						
- 1.2809E+03	0.0000E+00	2.6717E+00						

Table 5-15 [5] Markov Matrix

Appendix H. Markov matrices – issued from [6]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [6]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.7798E+03	0.0000E+00	3.3034E+03	1.4757E+05	0.0000E+00	2.6717E+00	9.3255E+03	0.0000E+00	1.0625E-01
1.6369E+03	0.0000E+00	5.5986E+01	1.3961E+05	1.3543E+04	2.6717E+00	8.1842E+03	0.0000E+00	2.6717E+00
1.5655E+03	0.0000E+00	1.9132E+03	1.3164E+05	0.0000E+00	5.3434E+00	7.6135E+03	1.4617E+03	9.5547E+00
1.4941E+03	6.4896E+01	3.0250E+02	1.2368E+05	1.3543E+04	2.6717E+00	7.6135E+03	0.0000E+00	1.2500E+00
1.4941E+03	0.0000E+00	6.8650E+03	1.2368E+05	6.7714E+03	8.0151E+00	7.0429E+03	4.8722E+02	1.0784E+02
1.4227E+03	6.4896E+01	9.6986E+02	1.2368E+05	0.0000E+00	8.0151E+00	7.0429E+03	0.0000E+00	1.2353E+03
1.4227E+03	0.0000E+00	1.1108E+04	1.1572E+05	2.7086E+04	2.6717E+00	6.4722E+03	3.8977E+03	2.6717E+00
1.3513E+03	2.5959E+02	1.5125E+02	1.1572E+05	6.7714E+03	2.7780E+00	6.4722E+03	1.9489E+03	3.5000E+00
1.3513E+03	1.2979E+02	1.5844E+02	1.1572E+05	0.0000E+00	1.1515E+01	6.4722E+03	9.7443E+02	1.2500E+00
1.3513E+03	6.4896E+01	4.3795E+03	1.0776E+05	1.3543E+04	2.6717E+00	6.4722E+03	0.0000E+00	4.9346E+02
1.3513E+03	0.0000E+00	4.7004E+04	1.0776E+05	6.7714E+03	8.0151E+00	5.9015E+03	5.8466E+03	8.5826E-01
1.2798E+03	3.2448E+02	1.2593E+00	1.0776E+05	0.0000E+00	2.3136E+01	5.9015E+03	2.9233E+03	6.1717E+00
1.2798E+03	1.9469E+02	1.5844E+02	9.9794E+04	3.3857E+04	3.5000E+00	5.9015E+03	1.9489E+03	2.7780E+00
1.2798E+03	1.2979E+02	4.0118E+03	9.9794E+04	6.7714E+03	1.1515E+01	5.9015E+03	1.4617E+03	1.0994E+02
1.2798E+03	6.4896E+01	2.0654E+04	9.9794E+04	0.0000E+00	4.6995E+01	5.9015E+03	9.7443E+02	1.2629E+01
1.2798E+03	0.0000E+00	2.3143E+05	9.1832E+04	4.7400E+04	2.6717E+00	5.9015E+03	4.8722E+02	3.8397E+03
1.2084E+03	4.5427E+02	1.2299E+01	9.1832E+04	2.7086E+04	2.6717E+00	5.9015E+03	0.0000E+00	4.5806E+03
1.2084E+03	3.2448E+02	5.2085E+00	9.1832E+04	2.0314E+04	3.5000E+00	5.3309E+03	5.3594E+03	3.5300E+00
1.2084E+03	2.5959E+02	1.5768E+03	9.1832E+04	6.7714E+03	2.6717E+00	5.3309E+03	2.9233E+03	1.9914E+01
1.2084E+03	1.2979E+02	5.6217E+03	9.1832E+04	0.0000E+00	2.5914E+01	5.3309E+03	2.4361E+03	1.0815E+01
1.2084E+03	6.4896E+01	1.2525E+05	8.3870E+04	8.8029E+04	1.2500E+00	5.3309E+03	1.9489E+03	6.8958E+00
1.2084E+03	0.0000E+00	5.7115E+05	8.3870E+04	4.7400E+04	1.0500E+01	5.3309E+03	1.4617E+03	3.1493E+01
1.1370E+03	5.1917E+02	1.4970E+01	8.3870E+04	3.3857E+04	7.1062E+00	5.3309E+03	9.7443E+02	2.4445E+01
1.1370E+03	4.5427E+02	1.2299E+01	8.3870E+04	2.7086E+04	1.3917E+01	5.3309E+03	4.8722E+02	6.5040E+03
1.1370E+03	3.8938E+02	5.3125E-02	8.3870E+04	2.0314E+04	1.3593E+01	5.3309E+03	0.0000E+00	5.2372E+04
1.1370E+03	3.2448E+02	1.3415E+02	8.3870E+04	1.3543E+04	1.5843E+01	4.7602E+03	9.2571E+03	1.0625E-01
1.1370E+03	2.5959E+02	7.9220E+01	8.3870E+04	6.7714E+03	2.5538E+01	4.7602E+03	6.8210E+03	2.6717E+00
1.1370E+03	1.9469E+02	1.1592E+04	8.3870E+04	0.0000E+00	8.1319E+01	4.7602E+03	5.3594E+03	5.9613E+00
1.1370E+03	1.2979E+02	2.1760E+04	7.5907E+04	2.0991E+05	1.3359E+00	4.7602E+03	4.8722E+03	2.8189E+00
1.1370E+03	6.4896E+01	3.7855E+05	7.5907E+04	6.7714E+04	3.5000E+00	4.7602E+03	3.8977E+03	1.0625E-01
1.1370E+03	0.0000E+00	1.5643E+06	7.5907E+04	4.0629E+04	3.5000E+00	4.7602E+03	2.9233E+03	1.7398E+02
1.0656E+03	1.1032E+03	3.0568E+02	7.5907E+04	3.3857E+04	1.6589E+01	4.7602E+03	2.4361E+03	4.3844E+03
1.0656E+03	9.0855E+02	5.5986E+01	7.5907E+04	2.0314E+04	3.4917E+01	4.7602E+03	1.9489E+03	1.1447E+03
1.0656E+03	7.7876E+02	8.1892E+01	7.5907E+04	1.3543E+04	1.1028E+01	4.7602E+03	1.4617E+03	3.4787E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0656E+03	5.1917E+02	2.6717E+00	7.5907E+04	6.7714E+03	3.8702E+01	4.7602E+03	9.7443E+02	6.1656E+03
1.0656E+03	4.5427E+02	8.2042E+01	7.5907E+04	0.0000E+00	8.5074E+01	4.7602E+03	4.8722E+02	1.2266E+05
1.0656E+03	3.8938E+02	7.8395E+02	6.7945E+04	2.0991E+05	1.3359E+00	4.7602E+03	0.0000E+00	2.6140E+05
1.0656E+03	3.2448E+02	2.6870E+03	6.7945E+04	1.0834E+05	2.6717E+00	4.1895E+03	6.8210E+03	2.6859E+02
1.0656E+03	2.5959E+02	5.8830E+03	6.7945E+04	6.0943E+04	1.0625E-01	4.1895E+03	6.3338E+03	6.9067E+02
1.0656E+03	1.9469E+02	1.6537E+04	6.7945E+04	4.7400E+04	1.2500E+00	4.1895E+03	5.3594E+03	3.5922E+01
1.0656E+03	1.2979E+02	1.4970E+05	6.7945E+04	4.0629E+04	7.4217E+00	4.1895E+03	4.8722E+03	2.2801E+01
1.0656E+03	6.4896E+01	1.2526E+06	6.7945E+04	3.3857E+04	1.0625E-01	4.1895E+03	4.3850E+03	4.1532E+02
1.0656E+03	0.0000E+00	4.1239E+06	6.7945E+04	2.7086E+04	7.0000E+00	4.1895E+03	3.8977E+03	1.1718E+02
9.9417E+02	1.9469E+03	7.9220E+01	6.7945E+04	2.0314E+04	2.5515E+01	4.1895E+03	3.4105E+03	4.4894E+02
9.9417E+02	1.6873E+03	6.1320E+02	6.7945E+04	1.3543E+04	1.3172E+01	4.1895E+03	2.9233E+03	2.0348E+04
9.9417E+02	1.4926E+03	1.5844E+02	6.7945E+04	6.7714E+03	1.9682E+01	4.1895E+03	2.4361E+03	2.1576E+04
9.9417E+02	1.2979E+03	8.4903E+02	6.7945E+04	0.0000E+00	2.9776E+01	4.1895E+03	1.9489E+03	1.8949E+04
9.9417E+02	1.0383E+03	2.7876E+02	5.9983E+04	1.7606E+05	2.6717E+00	4.1895E+03	1.4617E+03	4.4207E+04
9.9417E+02	9.7345E+02	2.7516E+02	5.9983E+04	1.6251E+05	2.6717E+00	4.1895E+03	9.7443E+02	9.3209E+04
9.9417E+02	9.0855E+02	5.4145E+03	5.9983E+04	1.4220E+05	1.3359E+00	4.1895E+03	4.8722E+02	3.8752E+05
9.9417E+02	8.4365E+02	1.8940E+03	5.9983E+04	8.1257E+04	2.6717E+00	4.1895E+03	0.0000E+00	9.3422E+05
9.9417E+02	7.7876E+02	9.1464E+03	5.9983E+04	6.7714E+04	3.5000E+00	3.6189E+03	1.1206E+04	1.4421E+00
9.9417E+02	7.1386E+02	1.6153E+04	5.9983E+04	5.4171E+04	3.5000E+00	3.6189E+03	8.7699E+03	1.0625E-01
9.9417E+02	6.4896E+02	2.5809E+04	5.9983E+04	4.0629E+04	7.0000E+00	3.6189E+03	6.8210E+03	2.8842E+00
9.9417E+02	5.8407E+02	7.4155E+03	5.9983E+04	3.3857E+04	9.6717E+00	3.6189E+03	5.8466E+03	9.5547E+00
9.9417E+02	5.1917E+02	1.6228E+04	5.9983E+04	2.7086E+04	1.8028E+01	3.6189E+03	5.3594E+03	3.3421E+03
9.9417E+02	4.5427E+02	1.1968E+04	5.9983E+04	2.0314E+04	4.7500E+00	3.6189E+03	4.8722E+03	4.6622E+03
9.9417E+02	3.8938E+02	1.4651E+04	5.9983E+04	1.3543E+04	3.2538E+01	3.6189E+03	4.3850E+03	2.4622E+04
9.9417E+02	3.2448E+02	2.9139E+04	5.9983E+04	6.7714E+03	2.2308E+01	3.6189E+03	3.8977E+03	3.5781E+04
9.9417E+02	2.5959E+02	5.0059E+04	5.9983E+04	0.0000E+00	7.4824E+01	3.6189E+03	3.4105E+03	1.7385E+05
9.9417E+02	1.9469E+02	8.0635E+04	5.2021E+04	1.8283E+05	1.3359E+00	3.6189E+03	2.9233E+03	2.2664E+05
9.9417E+02	1.2979E+02	5.2382E+05	5.2021E+04	1.6929E+05	1.3359E+00	3.6189E+03	2.4361E+03	1.9979E+05
9.9417E+02	6.4896E+01	3.7496E+06	5.2021E+04	1.5574E+05	1.7500E+00	3.6189E+03	1.9489E+03	2.8077E+05
9.9417E+02	0.0000E+00	8.5771E+06	5.2021E+04	1.4897E+05	6.5858E+00	3.6189E+03	1.4617E+03	2.2668E+05
9.2275E+02	2.1416E+03	7.9220E+01	5.2021E+04	1.4220E+05	1.3359E+00	3.6189E+03	9.7443E+02	4.0170E+05
9.2275E+02	2.0767E+03	1.5844E+02	5.2021E+04	1.3543E+05	1.7500E+00	3.6189E+03	4.8722E+02	1.0037E+06
9.2275E+02	1.9469E+03	9.4432E+02	5.2021E+04	1.1511E+05	1.7500E+00	3.6189E+03	0.0000E+00	2.3855E+06
9.2275E+02	1.8820E+03	1.0163E+03	5.2021E+04	9.4800E+04	5.3434E+00	3.0482E+03	1.4617E+04	6.2500E-01
9.2275E+02	1.8171E+03	1.1589E+03	5.2021E+04	7.4486E+04	2.6717E+00	3.0482E+03	1.4129E+04	6.2500E-01
9.2275E+02	1.7522E+03	1.9628E+02	5.2021E+04	6.7714E+04	3.6063E+00	3.0482E+03	1.1693E+04	2.6717E+00
9.2275E+02	1.6873E+03	2.7035E+03	5.2021E+04	5.4171E+04	1.0625E-01	3.0482E+03	1.1206E+04	2.8850E+00
9.2275E+02	1.6224E+03	3.2936E+03	5.2021E+04	4.7400E+04	8.2500E+00	3.0482E+03	9.2571E+03	1.0151E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.2275E+02	1.5575E+03	1.4783E+03	5.2021E+04	4.0629E+04	1.6778E+01	3.0482E+03	7.7955E+03	3.1284E+02
9.2275E+02	1.4926E+03	2.5100E+03	5.2021E+04	3.3857E+04	9.8842E+00	3.0482E+03	7.3083E+03	5.6363E+01
9.2275E+02	1.4277E+03	4.8650E+02	5.2021E+04	2.7086E+04	2.3606E+01	3.0482E+03	6.8210E+03	7.1814E+03
9.2275E+02	1.3628E+03	8.1907E+03	5.2021E+04	2.0314E+04	2.9015E+01	3.0482E+03	6.3338E+03	2.7096E+03
9.2275E+02	1.2979E+03	2.3750E+03	5.2021E+04	1.3543E+04	3.3871E+01	3.0482E+03	5.8466E+03	6.5623E+03
9.2275E+02	1.2330E+03	7.1372E+03	5.2021E+04	6.7714E+03	5.2811E+01	3.0482E+03	5.3594E+03	6.6190E+04
9.2275E+02	1.1681E+03	3.1452E+04	5.2021E+04	0.0000E+00	1.1682E+02	3.0482E+03	4.8722E+03	9.5233E+04
9.2275E+02	1.1032E+03	2.8882E+04	4.4058E+04	1.5574E+05	3.0859E+00	3.0482E+03	4.3850E+03	2.0526E+05
9.2275E+02	1.0383E+03	3.1337E+04	4.4058E+04	1.4897E+05	3.5000E+00	3.0482E+03	3.8977E+03	2.4711E+05
9.2275E+02	9.7345E+02	6.0529E+04	4.4058E+04	1.4220E+05	4.8358E+00	3.0482E+03	3.4105E+03	4.5682E+05
9.2275E+02	9.0855E+02	1.2785E+05	4.4058E+04	1.3543E+05	1.2758E+01	3.0482E+03	2.9233E+03	4.8876E+05
9.2275E+02	8.4365E+02	1.4283E+05	4.4058E+04	1.2866E+05	5.7576E+00	3.0482E+03	2.4361E+03	5.9255E+05
9.2275E+02	7.7876E+02	1.5922E+05	4.4058E+04	1.2189E+05	6.5858E+00	3.0482E+03	1.9489E+03	5.2267E+05
9.2275E+02	7.1386E+02	2.2619E+05	4.4058E+04	1.0834E+05	2.6717E+00	3.0482E+03	1.4617E+03	5.8691E+05
9.2275E+02	6.4896E+02	3.6377E+05	4.4058E+04	1.0157E+05	2.6717E+00	3.0482E+03	9.7443E+02	1.0391E+06
9.2275E+02	5.8407E+02	4.8892E+05	4.4058E+04	8.8029E+04	2.6717E+00	3.0482E+03	4.8722E+02	2.5577E+06
9.2275E+02	5.1917E+02	6.0575E+05	4.4058E+04	8.1257E+04	2.6717E+00	3.0482E+03	0.0000E+00	5.1317E+06
9.2275E+02	4.5427E+02	6.4423E+05	4.4058E+04	6.7714E+04	6.6996E+00	2.4776E+03	1.3642E+04	5.3125E-02
9.2275E+02	3.8938E+02	7.8676E+05	4.4058E+04	6.0943E+04	7.0000E+00	2.4776E+03	1.2668E+04	1.7500E+00
9.2275E+02	3.2448E+02	6.1773E+05	4.4058E+04	5.4171E+04	7.2125E+00	2.4776E+03	1.1693E+04	4.2913E-01
9.2275E+02	2.5959E+02	6.3526E+05	4.4058E+04	4.7400E+04	1.4000E+01	2.4776E+03	1.1206E+04	4.8358E+00
9.2275E+02	1.9469E+02	8.7637E+05	4.4058E+04	4.0629E+04	1.2343E+01	2.4776E+03	1.0719E+04	1.3359E+00
9.2275E+02	1.2979E+02	2.1910E+06	4.4058E+04	3.3857E+04	2.6278E+01	2.4776E+03	9.7443E+03	5.0848E+00
9.2275E+02	6.4896E+01	8.3022E+06	4.4058E+04	2.7086E+04	3.2621E+01	2.4776E+03	8.7699E+03	2.6347E+01
9.2275E+02	0.0000E+00	1.5857E+07	4.4058E+04	2.0314E+04	4.4558E+01	2.4776E+03	8.2827E+03	1.8563E+00
8.5133E+02	2.0767E+03	8.3866E+02	4.4058E+04	1.3543E+04	6.5672E+01	2.4776E+03	7.7955E+03	6.8285E+03
8.5133E+02	2.0118E+03	2.8662E+02	4.4058E+04	6.7714E+03	1.3050E+02	2.4776E+03	7.3083E+03	1.0240E+04
8.5133E+02	1.9469E+03	2.3552E+03	4.4058E+04	0.0000E+00	1.0580E+04	2.4776E+03	6.8210E+03	3.1395E+04
8.5133E+02	1.8820E+03	3.5714E+03	3.6096E+04	1.9637E+05	1.3359E+00	2.4776E+03	6.3338E+03	7.0806E+04
8.5133E+02	1.8171E+03	2.6578E+03	3.6096E+04	1.8283E+05	6.2500E-01	2.4776E+03	5.8466E+03	1.3141E+05
8.5133E+02	1.7522E+03	6.6184E+03	3.6096E+04	1.6929E+05	5.3125E-02	2.4776E+03	5.3594E+03	2.7954E+05
8.5133E+02	1.6873E+03	5.2695E+03	3.6096E+04	1.6251E+05	3.5000E+00	2.4776E+03	4.8722E+03	3.5932E+05
8.5133E+02	1.6224E+03	1.8037E+04	3.6096E+04	1.5574E+05	1.3359E+00	2.4776E+03	4.3850E+03	4.9670E+05
8.5133E+02	1.5575E+03	1.8071E+04	3.6096E+04	1.4897E+05	3.5000E+00	2.4776E+03	3.8977E+03	6.9443E+05
8.5133E+02	1.4926E+03	1.3055E+04	3.6096E+04	1.4220E+05	6.1717E+00	2.4776E+03	3.4105E+03	9.4667E+05
8.5133E+02	1.4277E+03	3.7349E+04	3.6096E+04	1.3543E+05	6.7967E+00	2.4776E+03	2.9233E+03	8.3135E+05
8.5133E+02	1.3628E+03	3.6754E+04	3.6096E+04	1.2866E+05	3.0859E+00	2.4776E+03	2.4361E+03	1.8876E+06
8.5133E+02	1.2979E+03	8.6027E+04	3.6096E+04	1.2189E+05	4.8358E+00	2.4776E+03	1.9489E+03	1.0857E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.5133E+02	1.2330E+03	1.3276E+05	3.6096E+04	1.1511E+05	5.3434E+00	2.4776E+03	1.4617E+03	1.1354E+06
8.5133E+02	1.1681E+03	1.9685E+05	3.6096E+04	1.0834E+05	1.0625E-01	2.4776E+03	9.7443E+02	1.7653E+06
8.5133E+02	1.1032E+03	3.1810E+05	3.6096E+04	9.4800E+04	1.7500E+00	2.4776E+03	4.8722E+02	4.0861E+06
8.5133E+02	1.0383E+03	3.6554E+05	3.6096E+04	8.1257E+04	2.7780E+00	2.4776E+03	0.0000E+00	8.2474E+06
8.5133E+02	9.7345E+02	5.8185E+05	3.6096E+04	7.4486E+04	3.5000E+00	1.9069E+03	1.4129E+04	5.3125E-02
8.5133E+02	9.0855E+02	8.0728E+05	3.6096E+04	6.7714E+04	9.7779E+00	1.9069E+03	1.3155E+04	5.3125E-02
8.5133E+02	8.4365E+02	1.1619E+06	3.6096E+04	6.0943E+04	3.8089E+01	1.9069E+03	1.1693E+04	1.5938E-01
8.5133E+02	7.7876E+02	1.4323E+06	3.6096E+04	5.4171E+04	4.2524E+01	1.9069E+03	1.1206E+04	7.9236E+02
8.5133E+02	7.1386E+02	2.1501E+06	3.6096E+04	4.7400E+04	5.4085E+01	1.9069E+03	1.0719E+04	5.4443E+02
8.5133E+02	6.4896E+02	2.7783E+06	3.6096E+04	4.0629E+04	1.7200E+01	1.9069E+03	1.0232E+04	8.7461E+02
8.5133E+02	5.8407E+02	3.0192E+06	3.6096E+04	3.3857E+04	5.5102E+01	1.9069E+03	9.7443E+03	2.4061E+03
8.5133E+02	5.1917E+02	3.5968E+06	3.6096E+04	2.7086E+04	3.5950E+01	1.9069E+03	9.2571E+03	3.0693E+03
8.5133E+02	4.5427E+02	4.0711E+06	3.6096E+04	2.0314E+04	1.5475E+02	1.9069E+03	8.7699E+03	6.8478E+03
8.5133E+02	3.8938E+02	4.2278E+06	3.6096E+04	1.3543E+04	1.2038E+02	1.9069E+03	8.2827E+03	1.3857E+04
8.5133E+02	3.2448E+02	4.0423E+06	3.6096E+04	6.7714E+03	1.7299E+04	1.9069E+03	7.7955E+03	4.7166E+04
8.5133E+02	2.5959E+02	3.1055E+06	3.6096E+04	0.0000E+00	4.2276E+04	1.9069E+03	7.3083E+03	5.4415E+04
8.5133E+02	1.9469E+02	3.2519E+06	2.8134E+04	1.7606E+05	1.7500E+00	1.9069E+03	6.8210E+03	1.2019E+05
8.5133E+02	1.2979E+02	5.3984E+06	2.8134E+04	1.6929E+05	1.7500E+00	1.9069E+03	6.3338E+03	2.3020E+05
8.5133E+02	6.4896E+01	1.5374E+07	2.8134E+04	1.6251E+05	5.3125E-02	1.9069E+03	5.8466E+03	3.6510E+05
8.5133E+02	0.0000E+00	2.3423E+07	2.8134E+04	1.5574E+05	1.9609E+00	1.9069E+03	5.3594E+03	5.0507E+05
7.7991E+02	2.5959E+03	1.5125E+02	2.8134E+04	1.4897E+05	1.8031E+00	1.9069E+03	4.8722E+03	6.5746E+05
7.7991E+02	2.5310E+03	3.3049E+02	2.8134E+04	1.4220E+05	7.9217E+00	1.9069E+03	4.3850E+03	8.3903E+05
7.7991E+02	2.4661E+03	5.2170E+01	2.8134E+04	1.3543E+05	8.3358E+00	1.9069E+03	3.8977E+03	1.3471E+06
7.7991E+02	2.2714E+03	3.0250E+02	2.8134E+04	1.2866E+05	2.3750E+00	1.9069E+03	3.4105E+03	1.3299E+06
7.7991E+02	2.2065E+03	3.8966E+02	2.8134E+04	1.2189E+05	1.8031E+00	1.9069E+03	2.9233E+03	1.8530E+06
7.7991E+02	2.1416E+03	3.6241E+02	2.8134E+04	1.1511E+05	4.8358E+00	1.9069E+03	2.4361E+03	1.8394E+06
7.7991E+02	2.0767E+03	6.4097E+02	2.8134E+04	1.0834E+05	1.4623E+01	1.9069E+03	1.9489E+03	1.9274E+06
7.7991E+02	2.0118E+03	3.5229E+03	2.8134E+04	1.0157E+05	9.3730E+00	1.9069E+03	1.4617E+03	2.0605E+06
7.7991E+02	1.9469E+03	4.6727E+03	2.8134E+04	9.4800E+04	1.5545E+01	1.9069E+03	9.7443E+02	2.9141E+06
7.7991E+02	1.8820E+03	8.8079E+03	2.8134E+04	8.8029E+04	1.4922E+01	1.9069E+03	4.8722E+02	6.6701E+06
7.7991E+02	1.8171E+03	1.3215E+04	2.8134E+04	8.1257E+04	2.3996E+01	1.9069E+03	0.0000E+00	1.3621E+07
7.7991E+02	1.7522E+03	2.4807E+04	2.8134E+04	7.4486E+04	1.6978E+01	1.3362E+03	1.7540E+04	1.2299E+01
7.7991E+02	1.6873E+03	2.2322E+04	2.8134E+04	6.7714E+04	1.7093E+01	1.3362E+03	1.7053E+04	1.0625E-01
7.7991E+02	1.6224E+03	3.7906E+04	2.8134E+04	6.0943E+04	7.5256E+01	1.3362E+03	1.6565E+04	5.3125E-02
7.7991E+02	1.5575E+03	7.0983E+04	2.8134E+04	5.4171E+04	5.8602E+01	1.3362E+03	1.5591E+04	1.4421E+00
7.7991E+02	1.4926E+03	9.3695E+04	2.8134E+04	4.7400E+04	5.7594E+01	1.3362E+03	1.5104E+04	5.3538E-01
7.7991E+02	1.4277E+03	1.6357E+05	2.8134E+04	4.0629E+04	1.3417E+02	1.3362E+03	1.4617E+04	1.8141E-01
7.7991E+02	1.3628E+03	2.5418E+05	2.8134E+04	3.3857E+04	2.2319E+02	1.3362E+03	1.4129E+04	1.0625E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.7991E+02	1.2979E+03	3.6975E+05	2.8134E+04	2.7086E+04	2.1438E+02	1.3362E+03	1.3642E+04	1.7485E+00
7.7991E+02	1.2330E+03	4.7650E+05	2.8134E+04	2.0314E+04	3.7311E+03	1.3362E+03	1.3155E+04	8.0395E-01
7.7991E+02	1.1681E+03	6.0582E+05	2.8134E+04	1.3543E+04	7.4064E+03	1.3362E+03	1.2668E+04	4.7108E+02
7.7991E+02	1.1032E+03	9.5183E+05	2.8134E+04	6.7714E+03	9.4353E+04	1.3362E+03	1.2180E+04	4.7688E+00
7.7991E+02	1.0383E+03	1.2674E+06	2.8134E+04	0.0000E+00	1.2983E+05	1.3362E+03	1.1693E+04	1.5170E+02
7.7991E+02	9.7345E+02	1.4831E+06	2.0172E+04	3.2503E+05	1.3359E+00	1.3362E+03	1.1206E+04	8.2647E+02
7.7991E+02	9.0855E+02	2.5396E+06	2.0172E+04	1.8960E+05	5.3125E-02	1.3362E+03	1.0719E+04	8.3938E+02
7.7991E+02	8.4365E+02	3.0652E+06	2.0172E+04	1.8283E+05	5.3125E-02	1.3362E+03	1.0232E+04	1.0769E+03
7.7991E+02	7.7876E+02	3.6936E+06	2.0172E+04	1.5574E+05	6.3826E+00	1.3362E+03	9.7443E+03	7.0369E+03
7.7991E+02	7.1386E+02	4.7359E+06	2.0172E+04	1.4897E+05	1.9609E+00	1.3362E+03	9.2571E+03	2.0465E+04
7.7991E+02	6.4896E+02	5.5056E+06	2.0172E+04	1.4220E+05	5.3125E-02	1.3362E+03	8.7699E+03	2.3317E+04
7.7991E+02	5.8407E+02	6.6387E+06	2.0172E+04	1.3543E+05	6.7813E-01	1.3362E+03	8.2827E+03	3.8279E+04
7.7991E+02	5.1917E+02	7.6930E+06	2.0172E+04	1.2866E+05	3.6250E+00	1.3362E+03	7.7955E+03	6.9176E+04
7.7991E+02	4.5427E+02	7.6520E+06	2.0172E+04	1.2189E+05	3.1390E+00	1.3362E+03	7.3083E+03	1.8491E+05
7.7991E+02	3.8938E+02	8.1648E+06	2.0172E+04	1.1511E+05	2.7780E+00	1.3362E+03	6.8210E+03	2.4188E+05
7.7991E+02	3.2448E+02	7.1033E+06	2.0172E+04	1.0834E+05	3.0000E+00	1.3362E+03	6.3338E+03	3.2255E+05
7.7991E+02	2.5959E+02	6.3236E+06	2.0172E+04	1.0157E+05	9.3750E+00	1.3362E+03	5.8466E+03	5.0592E+05
7.7991E+02	1.9469E+02	5.6059E+06	2.0172E+04	9.4800E+04	2.2552E+01	1.3362E+03	5.3594E+03	7.8842E+05
7.7991E+02	1.2979E+02	7.7993E+06	2.0172E+04	8.8029E+04	2.6362E+01	1.3362E+03	4.8722E+03	9.4062E+05
7.7991E+02	6.4896E+01	2.0264E+07	2.0172E+04	8.1257E+04	3.8293E+01	1.3362E+03	4.3850E+03	1.3937E+06
7.7991E+02	0.0000E+00	2.9528E+07	2.0172E+04	7.4486E+04	6.2642E+01	1.3362E+03	3.8977E+03	1.5783E+06
7.0850E+02	2.5959E+03	2.7993E+01	2.0172E+04	6.7714E+04	4.0994E+01	1.3362E+03	3.4105E+03	2.1979E+06
7.0850E+02	2.5310E+03	1.5125E+02	2.0172E+04	6.0943E+04	1.3033E+02	1.3362E+03	2.9233E+03	2.7473E+06
7.0850E+02	2.3363E+03	2.0724E+02	2.0172E+04	5.4171E+04	1.8066E+03	1.3362E+03	2.4361E+03	2.7887E+06
7.0850E+02	2.2714E+03	3.0851E+02	2.0172E+04	4.7400E+04	1.8809E+03	1.3362E+03	1.9489E+03	3.1121E+06
7.0850E+02	2.2065E+03	2.5053E+03	2.0172E+04	4.0629E+04	1.8101E+03	1.3362E+03	1.4617E+03	3.5346E+06
7.0850E+02	2.1416E+03	2.3033E+03	2.0172E+04	3.3857E+04	4.0756E+02	1.3362E+03	9.7443E+02	4.5367E+06
7.0850E+02	2.0767E+03	3.5655E+03	2.0172E+04	2.7086E+04	7.2952E+03	1.3362E+03	4.8722E+02	9.5148E+06
7.0850E+02	2.0118E+03	1.7174E+03	2.0172E+04	2.0314E+04	4.3826E+03	1.3362E+03	0.0000E+00	2.1852E+07
7.0850E+02	1.9469E+03	4.4449E+03	2.0172E+04	1.3543E+04	4.7428E+03	7.6556E+02	1.9001E+04	1.2299E+01
7.0850E+02	1.8820E+03	8.6259E+03	2.0172E+04	6.7714E+03	1.5782E+05	7.6556E+02	1.7540E+04	5.3125E-02
7.0850E+02	1.8171E+03	1.2441E+04	2.0172E+04	0.0000E+00	5.1507E+05	7.6556E+02	1.6565E+04	8.3790E+01
7.0850E+02	1.7522E+03	2.6056E+04	1.2209E+04	1.6929E+05	5.3125E-02	7.6556E+02	1.6078E+04	2.1899E+02
7.0850E+02	1.6873E+03	4.6581E+04	1.2209E+04	1.5574E+05	5.3125E-02	7.6556E+02	1.5591E+04	1.3907E+02
7.0850E+02	1.6224E+03	7.6714E+04	1.2209E+04	1.4897E+05	7.3125E-01	7.6556E+02	1.5104E+04	5.2297E+01
7.0850E+02	1.5575E+03	9.9971E+04	1.2209E+04	1.4220E+05	1.3359E+00	7.6556E+02	1.4617E+04	6.9132E+02
7.0850E+02	1.4926E+03	1.5179E+05	1.2209E+04	1.3543E+05	3.0000E+00	7.6556E+02	1.4129E+04	5.6183E-01
7.0850E+02	1.4277E+03	1.4603E+05	1.2209E+04	1.2866E+05	6.2500E-01	7.6556E+02	1.3642E+04	5.491E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.0850E+02	1.3628E+03	2.3746E+05	1.2209E+04	1.2189E+05	2.1202E+00	7.6556E+02	1.3155E+04	4.2519E+01
7.0850E+02	1.2979E+03	3.3926E+05	1.2209E+04	1.1511E+05	1.7500E+00	7.6556E+02	1.2668E+04	2.4530E+03
7.0850E+02	1.2330E+03	4.8159E+05	1.2209E+04	1.0834E+05	4.4748E+00	7.6556E+02	1.2180E+04	1.9265E+03
7.0850E+02	1.1681E+03	7.2119E+05	1.2209E+04	1.0157E+05	1.0264E+01	7.6556E+02	1.1693E+04	7.6049E+03
7.0850E+02	1.1032E+03	7.5741E+05	1.2209E+04	9.4800E+04	5.1872E+03	7.6556E+02	1.1206E+04	5.6758E+03
7.0850E+02	1.0383E+03	1.2958E+06	1.2209E+04	8.8029E+04	1.2450E+01	7.6556E+02	1.0719E+04	1.9587E+04
7.0850E+02	9.7345E+02	1.6064E+06	1.2209E+04	8.1257E+04	5.2456E+03	7.6556E+02	1.0232E+04	2.7821E+04
7.0850E+02	9.0855E+02	2.0546E+06	1.2209E+04	7.4486E+04	3.1094E+04	7.6556E+02	9.7443E+03	4.1023E+04
7.0850E+02	8.4365E+02	2.5126E+06	1.2209E+04	6.7714E+04	1.2328E+02	7.6556E+02	9.2571E+03	4.3654E+04
7.0850E+02	7.7876E+02	3.4128E+06	1.2209E+04	6.0943E+04	5.4856E+03	7.6556E+02	8.7699E+03	8.2881E+04
7.0850E+02	7.1386E+02	4.0663E+06	1.2209E+04	5.4171E+04	1.5734E+04	7.6556E+02	8.2827E+03	1.0195E+05
7.0850E+02	6.4896E+02	5.1342E+06	1.2209E+04	4.7400E+04	2.2710E+04	7.6556E+02	7.7955E+03	1.0881E+05
7.0850E+02	5.8407E+02	5.6725E+06	1.2209E+04	4.0629E+04	1.1170E+04	7.6556E+02	7.3083E+03	2.2258E+05
7.0850E+02	5.1917E+02	6.6360E+06	1.2209E+04	3.3857E+04	3.3247E+04	7.6556E+02	6.8210E+03	3.7580E+05
7.0850E+02	4.5427E+02	6.8335E+06	1.2209E+04	2.7086E+04	7.7076E+03	7.6556E+02	6.3338E+03	4.1440E+05
7.0850E+02	3.8938E+02	6.9677E+06	1.2209E+04	2.0314E+04	8.0758E+03	7.6556E+02	5.8466E+03	8.5645E+05
7.0850E+02	3.2448E+02	6.3287E+06	1.2209E+04	1.3543E+04	3.3360E+04	7.6556E+02	5.3594E+03	9.6343E+05
7.0850E+02	2.5959E+02	5.3136E+06	1.2209E+04	6.7714E+03	5.6062E+05	7.6556E+02	4.8722E+03	1.3862E+06
7.0850E+02	1.9469E+02	5.0015E+06	1.2209E+04	0.0000E+00	3.2576E+06	7.6556E+02	4.3850E+03	1.6814E+06
7.0850E+02	1.2979E+02	7.5300E+06	4.2470E+03	3.3857E+05	1.3359E+00	7.6556E+02	3.8977E+03	2.3272E+06
7.0850E+02	6.4896E+01	2.1207E+07	4.2470E+03	2.0991E+05	5.3125E-02	7.6556E+02	3.4105E+03	2.6636E+06
7.0850E+02	0.0000E+00	3.1004E+07	4.2470E+03	1.9637E+05	1.0625E-01	7.6556E+02	2.9233E+03	3.4881E+06
6.3708E+02	2.8554E+03	1.5125E+02	4.2470E+03	1.6929E+05	6.2500E-01	7.6556E+02	2.4361E+03	4.1420E+06
6.3708E+02	2.7256E+03	4.0292E+01	4.2470E+03	1.6251E+05	1.3890E+00	7.6556E+02	1.9489E+03	5.1462E+06
6.3708E+02	2.6608E+03	4.0292E+01	4.2470E+03	1.5574E+05	1.4421E+00	7.6556E+02	1.4617E+03	4.8875E+06
6.3708E+02	2.5959E+03	6.4468E+01	4.2470E+03	1.4897E+05	1.4421E+00	7.6556E+02	9.7443E+02	6.6074E+06
6.3708E+02	2.5310E+03	1.2299E+01	4.2470E+03	1.4220E+05	2.5859E+00	7.6556E+02	4.8722E+02	1.4395E+07
6.3708E+02	2.4661E+03	3.7061E+02	4.2470E+03	1.3543E+05	1.5938E-01	7.6556E+02	0.0000E+00	3.1254E+07
6.3708E+02	2.4012E+03	3.1183E+02	4.2470E+03	1.2866E+05	1.0625E-01	1.9489E+02	1.9001E+04	5.3125E-02
6.3708E+02	2.3363E+03	2.2075E+03	4.2470E+03	1.2189E+05	3.3498E+00	1.9489E+02	1.8027E+04	5.3125E-02
6.3708E+02	2.2714E+03	2.2206E+03	4.2470E+03	1.1511E+05	1.5516E+04	1.9489E+02	1.7540E+04	4.8836E+00
6.3708E+02	2.2065E+03	3.5276E+03	4.2470E+03	1.0834E+05	1.5514E+04	1.9489E+02	1.7053E+04	5.2329E+01
6.3708E+02	2.1416E+03	1.7774E+03	4.2470E+03	1.0157E+05	2.0684E+04	1.9489E+02	1.6565E+04	3.0170E+01
6.3708E+02	2.0767E+03	2.4268E+03	4.2470E+03	9.4800E+04	3.6243E+04	1.9489E+02	1.6078E+04	4.9191E+00
6.3708E+02	2.0118E+03	7.1330E+03	4.2470E+03	8.8029E+04	6.2099E+04	1.9489E+02	1.5591E+04	6.5380E+01
6.3708E+02	1.9469E+03	5.6067E+03	4.2470E+03	8.1257E+04	6.3843E+04	1.9489E+02	1.5104E+04	3.3921E+02
6.3708E+02	1.8820E+03	1.0920E+04	4.2470E+03	7.4486E+04	7.2554E+04	1.9489E+02	1.4617E+04	1.5225E+03
6.3708E+02	1.8171E+03	1.4522E+04	4.2470E+03	6.7714E+04	9.3250E+04	1.9489E+02	1.4129E+04	2.8081E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.3708E+02	1.7522E+03	3.3844E+04	4.2470E+03	6.0943E+04	6.2343E+04	1.9489E+02	1.3642E+04	4.2649E+03
6.3708E+02	1.6873E+03	3.8894E+04	4.2470E+03	5.4171E+04	1.1452E+05	1.9489E+02	1.3155E+04	1.3067E+04
6.3708E+02	1.6224E+03	5.6466E+04	4.2470E+03	4.7400E+04	1.6808E+05	1.9489E+02	1.2668E+04	1.5360E+04
6.3708E+02	1.5575E+03	7.8171E+04	4.2470E+03	4.0629E+04	2.2573E+05	1.9489E+02	1.2180E+04	5.3050E+04
6.3708E+02	1.4926E+03	1.1306E+05	4.2470E+03	3.3857E+04	3.6083E+05	1.9489E+02	1.1693E+04	4.9865E+04
6.3708E+02	1.4277E+03	1.4156E+05	4.2470E+03	2.7086E+04	7.3085E+05	1.9489E+02	1.1206E+04	6.3874E+04
6.3708E+02	1.3628E+03	1.7068E+05	4.2470E+03	2.0314E+04	1.4612E+06	1.9489E+02	1.0719E+04	8.2119E+04
6.3708E+02	1.2979E+03	2.6516E+05	4.2470E+03	1.3543E+04	2.4542E+06	1.9489E+02	1.0232E+04	5.7857E+04
6.3708E+02	1.2330E+03	3.4747E+05	4.2470E+03	6.7714E+03	3.8429E+06	1.9489E+02	9.7443E+03	8.9827E+04
6.3708E+02	1.1681E+03	4.8293E+05	4.2470E+03	0.0000E+00	1.3633E+07	1.9489E+02	9.2571E+03	8.1677E+04
6.3708E+02	1.1032E+03	6.7520E+05	- 3.7153E+03	3.0471E+05	1.3359E+00	1.9489E+02	8.7699E+03	1.3189E+05
6.3708E+02	1.0383E+03	8.4731E+05	- 3.7153E+03	2.3023E+05	5.3125E-02	1.9489E+02	8.2827E+03	1.4010E+05
6.3708E+02	9.7345E+02	1.1362E+06	- 3.7153E+03	2.1669E+05	5.3125E-02	1.9489E+02	7.7955E+03	2.4397E+05
6.3708E+02	9.0855E+02	1.5611E+06	- 3.7153E+03	1.8960E+05	5.3125E-02	1.9489E+02	7.3083E+03	3.0947E+05
6.3708E+02	8.4365E+02	1.9577E+06	- 3.7153E+03	1.8283E+05	1.5938E-01	1.9489E+02	6.8210E+03	4.5342E+05
6.3708E+02	7.7876E+02	2.3188E+06	- 3.7153E+03	1.6929E+05	1.0625E-01	1.9489E+02	6.3338E+03	6.0465E+05
6.3708E+02	7.1386E+02	3.2324E+06	- 3.7153E+03	1.5574E+05	6.7813E-01	1.9489E+02	5.8466E+03	8.8342E+05
6.3708E+02	6.4896E+02	3.3825E+06	- 3.7153E+03	1.4897E+05	7.8464E-02	1.9489E+02	5.3594E+03	1.1054E+06
6.3708E+02	5.8407E+02	4.0039E+06	- 3.7153E+03	1.4220E+05	2.7779E+00	1.9489E+02	4.8722E+03	1.6125E+06
6.3708E+02	5.1917E+02	4.5459E+06	- 3.7153E+03	1.3543E+05	3.0888E-01	1.9489E+02	4.3850E+03	1.9394E+06
6.3708E+02	4.5427E+02	4.9257E+06	- 3.7153E+03	1.2866E+05	8.3235E-01	1.9489E+02	3.8977E+03	2.4647E+06
6.3708E+02	3.8938E+02	5.0637E+06	- 3.7153E+03	1.2189E+05	1.5618E+01	1.9489E+02	3.4105E+03	3.1586E+06
6.3708E+02	3.2448E+02	4.9429E+06	- 3.7153E+03	1.1511E+05	5.1938E+03	1.9489E+02	2.9233E+03	4.1398E+06
6.3708E+02	2.5959E+02	4.8812E+06	- 3.7153E+03	1.0834E+05	3.7781E+01	1.9489E+02	2.4361E+03	5.4234E+06
6.3708E+02	1.9469E+02	4.1641E+06	- 3.7153E+03	1.0157E+05	5.1963E+03	1.9489E+02	1.9489E+03	6.9928E+06
6.3708E+02	1.2979E+02	6.1652E+06	- 3.7153E+03	9.4800E+04	1.0058E+02	1.9489E+02	1.4617E+03	7.8736E+06
6.3708E+02	6.4896E+01	1.8621E+07	- 3.7153E+03	8.8029E+04	2.2542E+04	1.9489E+02	9.7443E+02	8.7599E+06
6.3708E+02	0.0000E+00	3.0276E+07	- 3.7153E+03	8.1257E+04	6.8982E+03	1.9489E+02	4.8722E+02	1.9203E+07
5.6566E+02	2.8554E+03	2.1853E+01	- 3.7153E+03	7.4486E+04	1.0424E+04	1.9489E+02	0.0000E+00	4.1640E+07
5.6566E+02	2.7256E+03	1.5125E+02	- 3.7153E+03	6.7714E+04	1.1444E+04	- 3.7577E+02	1.8514E+04	4.2013E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.6566E+02	2.6608E+03	5.6947E+01	-	6.0943E+04	1.0752E+04	-	1.8027E+04	8.3917E+01
5.6566E+02	2.5959E+03	6.1882E+00	-	5.4171E+04	4.7328E+04	-	1.7053E+04	2.0739E+00
5.6566E+02	2.5310E+03	2.9374E+01	-	4.7400E+04	2.2900E+04	-	1.6565E+04	5.5432E+00
5.6566E+02	2.4661E+03	8.8775E+01	-	4.0629E+04	1.1538E+05	-	1.6078E+04	8.1330E+01
5.6566E+02	2.4012E+03	8.6322E+01	-	3.3857E+04	1.7059E+05	-	1.5591E+04	3.5014E+02
5.6566E+02	2.3363E+03	5.8859E+02	-	2.7086E+04	4.8321E+05	-	1.5104E+04	1.1657E+03
5.6566E+02	2.2714E+03	4.2323E+02	-	2.0314E+04	8.4909E+05	-	1.4617E+04	2.1715E+03
5.6566E+02	2.2065E+03	7.1596E+02	-	1.3543E+04	1.4306E+06	-	1.4129E+04	9.4798E+03
5.6566E+02	2.1416E+03	6.3692E+02	-	6.7714E+03	2.4957E+06	-	1.3642E+04	1.7935E+04
5.6566E+02	2.0767E+03	2.4003E+03	-	0.0000E+00	8.8077E+06	-	1.3155E+04	2.3839E+04
5.6566E+02	2.0118E+03	2.8274E+03	-	3.2503E+05	1.3359E+00	-	1.2668E+04	6.9970E+04
5.6566E+02	1.9469E+03	6.9488E+03	-	3.1149E+05	1.3359E+00	-	1.2180E+04	1.1988E+05
5.6566E+02	1.8820E+03	7.8645E+03	-	3.0471E+05	1.3359E+00	-	1.1693E+04	1.2233E+05
5.6566E+02	1.8171E+03	1.0321E+04	-	2.9117E+05	1.3359E+00	-	1.1206E+04	1.6336E+05
5.6566E+02	1.7522E+03	1.7497E+04	-	2.8440E+05	6.2500E-01	-	1.0719E+04	7.7340E+04
5.6566E+02	1.6873E+03	2.1477E+04	-	2.7763E+05	5.3125E-02	-	1.0232E+04	1.0615E+05
5.6566E+02	1.6224E+03	3.1471E+04	-	2.6409E+05	1.7500E+00	-	9.7443E+03	1.1032E+05
5.6566E+02	1.5575E+03	5.1400E+04	-	2.5731E+05	1.7500E+00	-	9.2571E+03	1.6879E+05
5.6566E+02	1.4926E+03	6.4091E+04	-	2.3700E+05	1.7500E+00	-	8.7699E+03	1.1454E+05
5.6566E+02	1.4277E+03	8.3510E+04	-	2.0991E+05	2.4281E+00	-	8.2827E+03	1.9057E+05
5.6566E+02	1.3628E+03	1.0674E+05	-	2.0314E+05	1.0625E-01	-	7.7955E+03	2.7187E+05
5.6566E+02	1.2979E+03	1.8511E+05	-	1.9637E+05	7.3125E-01	-	7.3083E+03	3.4063E+05
5.6566E+02	1.2330E+03	2.4268E+05	-	1.8960E+05	1.0625E-01	-	6.8210E+03	4.6853E+05
5.6566E+02	1.1681E+03	3.1399E+05	-	1.7606E+05	5.3125E-02	-	6.3338E+03	6.3790E+05
5.6566E+02	1.1032E+03	4.4696E+05	-	1.6929E+05	2.5339E-02	-	5.8466E+03	1.0724E+06
5.6566E+02	1.0383E+03	4.2309E+05	-	1.6251E+05	1.4952E+00	-	5.3594E+03	1.4034E+06
5.6566E+02	9.7345E+02	7.3042E+05	-	1.5574E+05	1.3396E+00	-	4.8722E+03	1.0615E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.6566E+02	9.0855E+02	7.4866E+05	-	1.4897E+05	1.4143E+00	-	4.3850E+03	2.2105E+06
5.6566E+02	8.4365E+02	1.0695E+06	-	1.4220E+05	1.2788E-01	-	3.8977E+03	2.9146E+06
5.6566E+02	7.7876E+02	1.2432E+06	-	1.3543E+05	2.7322E+00	-	3.4105E+03	3.6359E+06
5.6566E+02	7.1386E+02	1.6071E+06	-	1.2866E+05	3.7559E-01	-	2.9233E+03	4.7176E+06
5.6566E+02	6.4896E+02	1.9896E+06	-	1.2189E+05	8.4040E+01	-	2.4361E+03	5.7264E+06
5.6566E+02	5.8407E+02	2.2543E+06	-	1.1511E+05	1.8813E+02	-	1.9489E+03	6.6340E+06
5.6566E+02	5.1917E+02	2.7565E+06	-	1.0834E+05	2.3805E+02	-	1.4617E+03	7.1948E+06
5.6566E+02	4.5427E+02	2.8696E+06	-	1.0157E+05	1.7094E+03	-	9.7443E+02	8.8463E+06
5.6566E+02	3.8938E+02	3.5458E+06	-	9.4800E+04	6.0690E+01	-	4.8722E+02	1.8063E+07
5.6566E+02	3.2448E+02	3.3829E+06	-	8.8029E+04	4.5001E+02	-	0.0000E+00	3.7112E+07
5.6566E+02	2.5959E+02	3.8865E+06	-	8.1257E+04	7.3875E+02	-	1.8027E+04	5.2170E+01
5.6566E+02	1.9469E+02	4.0061E+06	-	7.4486E+04	5.7829E+03	-	1.7540E+04	8.5708E-01
5.6566E+02	1.2979E+02	5.5470E+06	-	6.7714E+04	8.1656E+03	-	1.7053E+04	8.0395E-01
5.6566E+02	6.4896E+01	1.7283E+07	-	6.0943E+04	1.4085E+04	-	1.6565E+04	3.3690E+02
5.6566E+02	0.0000E+00	3.2296E+07	-	5.4171E+04	1.9795E+04	-	1.6078E+04	4.3473E+01
4.9424E+02	2.6608E+03	4.7773E+00	-	4.7400E+04	7.1963E+04	-	1.5591E+04	7.3575E+01
4.9424E+02	2.5310E+03	1.4096E+02	-	4.0629E+04	1.6775E+05	-	1.5104E+04	2.3149E+02
4.9424E+02	2.4661E+03	9.5547E+00	-	3.3857E+04	3.4257E+05	-	1.4617E+04	9.4541E+02
4.9424E+02	2.4012E+03	7.6438E+00	-	2.7086E+04	6.8131E+05	-	1.4129E+04	4.4394E+03
4.9424E+02	2.3363E+03	1.4270E+02	-	2.0314E+04	1.1625E+06	-	1.3642E+04	1.2562E+04
4.9424E+02	2.2714E+03	3.5961E+02	-	1.3543E+04	1.4918E+06	-	1.3155E+04	1.3123E+04
4.9424E+02	2.2065E+03	2.8208E+03	-	6.7714E+03	3.4518E+06	-	1.2668E+04	2.0504E+04
4.9424E+02	2.1416E+03	1.7842E+03	-	0.0000E+00	8.5192E+06	-	1.2180E+04	4.5196E+04
4.9424E+02	2.0767E+03	1.6960E+03	-	3.2503E+05	1.3359E+00	-	1.1693E+04	3.0501E+04
4.9424E+02	2.0118E+03	1.2625E+03	-	3.1826E+05	1.3359E+00	-	1.1206E+04	6.9176E+04
4.9424E+02	1.9469E+03	2.5756E+03	-	3.0471E+05	1.3359E+00	-	1.0719E+04	7.0696E+04
4.9424E+02	1.8820E+03	3.4464E+03	-	2.9794E+05	1.7500E+00	-	1.0232E+04	1.1724E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.9424E+02	1.8171E+03	5.4972E+03	- 1.9640E+04	2.9117E+05	1.7500E+00	- 9.4644E+02	9.7443E+03	1.0206E+05
4.9424E+02	1.7522E+03	1.2059E+04	- 1.9640E+04	2.8440E+05	3.5000E+00	- 9.4644E+02	9.2571E+03	1.2999E+05
4.9424E+02	1.6873E+03	9.7091E+03	- 1.9640E+04	2.7763E+05	3.5000E+00	- 9.4644E+02	8.7699E+03	1.2940E+05
4.9424E+02	1.6224E+03	1.1183E+04	- 1.9640E+04	2.7086E+05	5.2500E+00	- 9.4644E+02	8.2827E+03	1.9678E+05
4.9424E+02	1.5575E+03	1.4249E+04	- 1.9640E+04	2.5731E+05	5.2500E+00	- 9.4644E+02	7.7955E+03	2.1502E+05
4.9424E+02	1.4926E+03	2.2387E+04	- 1.9640E+04	2.5054E+05	3.5000E+00	- 9.4644E+02	7.3083E+03	3.1156E+05
4.9424E+02	1.4277E+03	3.0203E+04	- 1.9640E+04	2.3700E+05	2.3750E+00	- 9.4644E+02	6.8210E+03	5.2698E+05
4.9424E+02	1.3628E+03	6.4578E+04	- 1.9640E+04	2.3023E+05	5.3125E-02	- 9.4644E+02	6.3338E+03	6.7807E+05
4.9424E+02	1.2979E+03	6.4961E+04	- 1.9640E+04	2.2346E+05	5.3125E-02	- 9.4644E+02	5.8466E+03	8.7430E+05
4.9424E+02	1.2330E+03	7.7311E+04	- 1.9640E+04	2.1669E+05	1.0625E-01	- 9.4644E+02	5.3594E+03	1.1270E+06
4.9424E+02	1.1681E+03	1.0019E+05	- 1.9640E+04	2.0991E+05	5.3125E-02	- 9.4644E+02	4.8722E+03	1.6999E+06
4.9424E+02	1.1032E+03	1.3646E+05	- 1.9640E+04	1.9637E+05	1.5938E-01	- 9.4644E+02	4.3850E+03	2.1218E+06
4.9424E+02	1.0383E+03	1.6238E+05	- 1.9640E+04	1.8960E+05	1.5938E-01	- 9.4644E+02	3.8977E+03	2.5042E+06
4.9424E+02	9.7345E+02	2.4391E+05	- 1.9640E+04	1.8283E+05	5.3125E-02	- 9.4644E+02	3.4105E+03	3.0723E+06
4.9424E+02	9.0855E+02	2.9966E+05	- 1.9640E+04	1.7606E+05	1.5938E-01	- 9.4644E+02	2.9233E+03	3.7425E+06
4.9424E+02	8.4365E+02	3.1937E+05	- 1.9640E+04	1.6929E+05	2.6563E-01	- 9.4644E+02	2.4361E+03	4.2146E+06
4.9424E+02	7.7876E+02	4.4449E+05	- 1.9640E+04	1.6251E+05	1.0625E-01	- 9.4644E+02	1.9489E+03	4.5941E+06
4.9424E+02	7.1386E+02	4.8849E+05	- 1.9640E+04	1.5574E+05	7.3125E-01	- 9.4644E+02	1.4617E+03	4.9151E+06
4.9424E+02	6.4896E+02	6.1127E+05	- 1.9640E+04	1.4897E+05	8.5922E+01	- 9.4644E+02	9.7443E+02	6.5024E+06
4.9424E+02	5.8407E+02	7.0411E+05	- 1.9640E+04	1.4220E+05	1.7189E+00	- 9.4644E+02	4.8722E+02	1.4432E+07
4.9424E+02	5.1917E+02	8.5242E+05	- 1.9640E+04	1.3543E+05	1.6689E+02	- 9.4644E+02	0.0000E+00	3.0345E+07
4.9424E+02	4.5427E+02	1.2116E+06	- 1.9640E+04	1.2866E+05	1.8969E+00	- 1.5171E+03	2.0463E+04	8.3361E+01
4.9424E+02	3.8938E+02	1.8981E+06	- 1.9640E+04	1.2189E+05	1.1108E+02	- 1.5171E+03	1.9489E+04	5.3125E-02
4.9424E+02	3.2448E+02	2.9986E+06	- 1.9640E+04	1.1511E+05	7.9596E+01	- 1.5171E+03	1.8027E+04	7.3620E-02
4.9424E+02	2.5959E+02	4.5358E+06	- 1.9640E+04	1.0834E+05	2.1469E+03	- 1.5171E+03	1.7540E+04	5.3538E-01
4.9424E+02	1.9469E+02	5.5480E+06	- 1.9640E+04	1.0157E+05	1.9147E+03	- 1.5171E+03	1.7053E+04	1.2675E-01
4.9424E+02	1.2979E+02	7.2889E+06	- 1.9640E+04	9.4800E+04	1.5478E+02	- 1.5171E+03	1.6565E+04	1.3027E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.9424E+02	6.4896E+01	1.9067E+07	-	8.8029E+04	2.7093E+03	-	1.6078E+04	3.8660E+01
4.9424E+02	0.0000E+00	3.8309E+07	-	8.1257E+04	2.1212E+03	-	1.5591E+04	1.9175E+01
4.2282E+02	2.7256E+03	1.9922E+01	-	7.4486E+04	6.5818E+03	-	1.5104E+04	1.4523E+02
4.2282E+02	2.5959E+03	1.5721E+01	-	6.7714E+04	1.0506E+04	-	1.4617E+04	2.2966E+02
4.2282E+02	2.5310E+03	4.8305E+00	-	6.0943E+04	2.5443E+04	-	1.4129E+04	3.3196E+02
4.2282E+02	2.4661E+03	1.9968E+02	-	5.4171E+04	3.9160E+04	-	1.3642E+04	1.5075E+03
4.2282E+02	2.3363E+03	1.6654E+02	-	4.7400E+04	5.9442E+04	-	1.3155E+04	2.3041E+03
4.2282E+02	2.2714E+03	5.1659E+01	-	4.0629E+04	2.3001E+05	-	1.2668E+04	1.8328E+03
4.2282E+02	2.2065E+03	1.9478E+01	-	3.3857E+04	5.7951E+05	-	1.2180E+04	6.2462E+03
4.2282E+02	2.1416E+03	1.0297E+02	-	2.7086E+04	1.5824E+06	-	1.1693E+04	6.7413E+03
4.2282E+02	2.0767E+03	4.4143E+02	-	2.0314E+04	3.3961E+06	-	1.1206E+04	1.9399E+04
4.2282E+02	2.0118E+03	2.1941E+03	-	1.3543E+04	4.7043E+06	-	1.0719E+04	1.7119E+04
4.2282E+02	1.9469E+03	9.2222E+02	-	6.7714E+03	8.7973E+06	-	1.0232E+04	4.8747E+04
4.2282E+02	1.8820E+03	1.4497E+03	-	0.0000E+00	1.8359E+07	-	9.7443E+03	5.6034E+04
4.2282E+02	1.8171E+03	3.8393E+03	-	3.0471E+05	3.0859E+00	-	9.2571E+03	8.7338E+04
4.2282E+02	1.7522E+03	1.4232E+03	-	2.9794E+05	3.0859E+00	-	8.7699E+03	8.8676E+04
4.2282E+02	1.6873E+03	1.3392E+03	-	2.9117E+05	9.2161E+00	-	8.2827E+03	1.4581E+05
4.2282E+02	1.6224E+03	8.0429E+03	-	2.8440E+05	1.0458E+01	-	7.7955E+03	2.4668E+05
4.2282E+02	1.5575E+03	4.7835E+03	-	2.7763E+05	8.2943E+00	-	7.3083E+03	2.7408E+05
4.2282E+02	1.4926E+03	9.6866E+03	-	2.7086E+05	1.0044E+01	-	6.8210E+03	3.9782E+05
4.2282E+02	1.4277E+03	1.6245E+04	-	2.6409E+05	5.2500E+00	-	6.3338E+03	5.3272E+05
4.2282E+02	1.3628E+03	1.3322E+04	-	2.5731E+05	4.3358E+00	-	5.8466E+03	8.3792E+05
4.2282E+02	1.2979E+03	1.3043E+04	-	2.4377E+05	5.3125E-02	-	5.3594E+03	1.0177E+06
4.2282E+02	1.2330E+03	1.8809E+04	-	2.3700E+05	1.3031E+00	-	4.8722E+03	1.3745E+06
4.2282E+02	1.1681E+03	3.5369E+04	-	2.3023E+05	5.3125E-02	-	4.3850E+03	1.6805E+06
4.2282E+02	1.1032E+03	3.1991E+04	-	2.1669E+05	7.3125E-01	-	3.8977E+03	2.0807E+06
4.2282E+02	1.0383E+03	3.4568E+04	-	2.0314E+05	5.3125E-02	-	3.4105E+03	2.1025E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.2282E+02	9.7345E+02	7.2403E+04	-	1.9637E+05	1.5938E-01	-	2.9233E+03	2.9261E+06
4.2282E+02	9.0855E+02	8.0214E+04	-	1.8960E+05	6.2500E-01	-	2.4361E+03	2.6987E+06
4.2282E+02	8.4365E+02	9.0968E+04	-	1.8283E+05	1.5938E-01	-	1.9489E+03	3.1656E+06
4.2282E+02	7.7876E+02	1.1113E+05	-	1.7606E+05	1.0625E-01	-	1.4617E+03	3.1364E+06
4.2282E+02	7.1386E+02	1.6090E+05	-	1.6929E+05	5.3125E-02	-	9.7443E+02	4.3380E+06
4.2282E+02	6.4896E+02	1.6485E+05	-	1.6251E+05	1.3008E+01	-	4.8722E+02	1.0389E+07
4.2282E+02	5.8407E+02	2.7974E+05	-	1.5574E+05	2.4044E+01	-	0.0000E+00	2.1122E+07
4.2282E+02	5.1917E+02	3.9580E+05	-	1.4897E+05	1.8105E+01	-	2.2412E+04	5.3125E-02
4.2282E+02	4.5427E+02	7.2115E+05	-	1.4220E+05	9.8900E+00	-	2.0950E+04	5.3125E-02
4.2282E+02	3.8938E+02	1.4768E+06	-	1.3543E+05	2.8447E+01	-	1.9001E+04	7.3620E-02
4.2282E+02	3.2448E+02	2.8606E+06	-	1.2866E+05	6.0036E+01	-	1.8027E+04	5.3125E-02
4.2282E+02	2.5959E+02	4.8130E+06	-	1.2189E+05	1.2267E+02	-	1.7540E+04	4.1462E+00
4.2282E+02	1.9469E+02	6.3641E+06	-	1.1511E+05	4.2076E+01	-	1.7053E+04	1.8765E+01
4.2282E+02	1.2979E+02	7.5781E+06	-	1.0834E+05	8.5937E+02	-	1.6565E+04	2.1530E+00
4.2282E+02	6.4896E+01	1.6516E+07	-	1.0157E+05	3.5477E+02	-	1.6078E+04	6.2319E+01
4.2282E+02	0.0000E+00	3.8460E+07	-	9.4800E+04	7.0379E+02	-	1.5591E+04	1.5150E+02
3.5140E+02	2.8554E+03	1.7500E+00	-	8.8029E+04	1.0683E+03	-	1.5104E+04	1.0186E+02
3.5140E+02	2.7905E+03	1.7500E+00	-	8.1257E+04	5.5172E+03	-	1.4617E+04	3.8002E+02
3.5140E+02	2.6608E+03	5.3125E-02	-	7.4486E+04	1.4376E+04	-	1.4129E+04	3.9749E+01
3.5140E+02	2.5310E+03	6.2500E-01	-	6.7714E+04	1.0882E+04	-	1.3642E+04	1.1710E+02
3.5140E+02	2.4661E+03	6.5443E+00	-	6.0943E+04	2.8641E+04	-	1.3155E+04	4.2358E+02
3.5140E+02	2.4012E+03	1.2670E+01	-	5.4171E+04	7.6053E+04	-	1.2668E+04	1.5111E+02
3.5140E+02	2.3363E+03	6.7298E-01	-	4.7400E+04	1.2186E+05	-	1.2180E+04	1.0077E+03
3.5140E+02	2.2714E+03	9.1834E+01	-	4.0629E+04	2.2016E+05	-	1.1693E+04	1.4654E+03
3.5140E+02	2.2065E+03	1.6989E+02	-	3.3857E+04	5.2712E+05	-	1.1206E+04	7.9029E+03
3.5140E+02	2.1416E+03	2.3187E+02	-	2.7086E+04	1.4435E+06	-	1.0719E+04	6.2392E+03
3.5140E+02	2.0767E+03	1.9076E+01	-	2.0314E+04	3.6002E+06	-	1.0232E+04	2.3681E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.5140E+02	2.0118E+03	2.8852E+01	-	1.3543E+04	5.7905E+06	-	9.7443E+03	5.7784E+03
3.5140E+02	1.9469E+03	8.0489E+01	-	6.7714E+03	1.0534E+07	-	9.2571E+03	7.5799E+03
3.5140E+02	1.8820E+03	2.2388E+03	-	0.0000E+00	2.0933E+07	-	8.7699E+03	5.3751E+04
3.5140E+02	1.8171E+03	1.2196E+02	-	3.0471E+05	6.9585E+00	-	8.2827E+03	5.0684E+04
3.5140E+02	1.7522E+03	7.1871E+02	-	2.9117E+05	5.3434E+00	-	7.7955E+03	1.2369E+05
3.5140E+02	1.6873E+03	2.3956E+03	-	2.8440E+05	1.1380E+01	-	7.3083E+03	1.5409E+05
3.5140E+02	1.6224E+03	1.0704E+03	-	2.7763E+05	7.5607E+00	-	6.8210E+03	2.6917E+05
3.5140E+02	1.5575E+03	3.7862E+02	-	2.7086E+05	6.1717E+00	-	6.3338E+03	3.7256E+05
3.5140E+02	1.4926E+03	1.2693E+03	-	2.6409E+05	1.2378E+01	-	5.8466E+03	5.1560E+05
3.5140E+02	1.4277E+03	1.7431E+03	-	2.5731E+05	1.8031E+00	-	5.3594E+03	8.9613E+05
3.5140E+02	1.3628E+03	1.8704E+03	-	2.5054E+05	6.9585E+00	-	4.8722E+03	1.1229E+06
3.5140E+02	1.2979E+03	3.6014E+03	-	2.3700E+05	4.1250E+00	-	4.3850E+03	1.2722E+06
3.5140E+02	1.2330E+03	4.3728E+03	-	2.3023E+05	6.2500E-01	-	3.8977E+03	1.8682E+06
3.5140E+02	1.1681E+03	8.2217E+03	-	2.2346E+05	6.2500E-01	-	3.4105E+03	2.0559E+06
3.5140E+02	1.1032E+03	8.5034E+03	-	2.1669E+05	4.1781E+00	-	2.9233E+03	2.0982E+06
3.5140E+02	1.0383E+03	1.1613E+04	-	2.0991E+05	3.6062E+00	-	2.4361E+03	1.9197E+06
3.5140E+02	9.7345E+02	1.8140E+04	-	2.0314E+05	2.4281E+00	-	1.9489E+03	2.1436E+06
3.5140E+02	9.0855E+02	3.1073E+04	-	1.8960E+05	1.1277E+01	-	1.4617E+03	2.2076E+06
3.5140E+02	8.4365E+02	3.0728E+04	-	1.8283E+05	1.2593E+00	-	9.7443E+02	3.4094E+06
3.5140E+02	7.7876E+02	5.2636E+04	-	1.7606E+05	1.1314E+01	-	4.8722E+02	7.6946E+06
3.5140E+02	7.1386E+02	9.7062E+04	-	1.6929E+05	8.6578E-01	-	0.0000E+00	1.4187E+07
3.5140E+02	6.4896E+02	1.9155E+05	-	1.6251E+05	1.8418E+00	-	1.7540E+04	4.8225E-01
3.5140E+02	5.8407E+02	2.4709E+05	-	1.5574E+05	6.2062E+00	-	1.6565E+04	1.0055E+00
3.5140E+02	5.1917E+02	5.0814E+05	-	1.4897E+05	2.6460E+00	-	1.6078E+04	5.9076E+00
3.5140E+02	4.5427E+02	9.1201E+05	-	1.4220E+05	1.1171E+02	-	1.5591E+04	7.8905E+00
3.5140E+02	3.8938E+02	1.7474E+06	-	1.3543E+05	6.7303E+01	-	1.5104E+04	4.3002E+00
3.5140E+02	3.2448E+02	3.2543E+06	-	1.2866E+05	4.7381E+02	-	1.4617E+04	1.0727E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.5140E+02	2.5959E+02	5.3574E+06	-	1.2189E+05	3.3369E+02	-	1.4129E+04	1.9063E+02
3.5140E+02	1.9469E+02	7.1637E+06	-	1.1511E+05	6.4974E+02	-	1.3642E+04	3.7414E+01
3.5140E+02	1.2979E+02	8.4783E+06	-	1.0834E+05	5.9435E+02	-	1.3155E+04	9.6586E+01
3.5140E+02	6.4896E+01	1.1912E+07	-	1.0157E+05	1.2931E+03	-	1.2668E+04	2.8085E+01
3.5140E+02	0.0000E+00	3.2648E+07	-	9.4800E+04	1.4574E+03	-	1.2180E+04	1.5507E+01
2.7998E+02	2.8554E+03	5.3125E-02	-	8.8029E+04	6.0787E+03	-	1.1693E+04	9.1204E+01
2.7998E+02	2.4661E+03	8.9588E+00	-	8.1257E+04	2.1809E+03	-	1.1206E+04	4.9444E+01
2.7998E+02	2.4012E+03	1.9199E+01	-	7.4486E+04	1.6656E+04	-	1.0719E+04	1.5070E+03
2.7998E+02	2.3363E+03	1.5465E+01	-	6.7714E+04	9.7119E+03	-	1.0232E+04	1.5633E+02
2.7998E+02	2.2714E+03	6.6390E+00	-	6.0943E+04	9.0589E+03	-	9.7443E+03	6.4952E+02
2.7998E+02	2.2065E+03	2.0765E+02	-	5.4171E+04	5.6196E+04	-	9.2571E+03	4.4198E+03
2.7998E+02	2.1416E+03	2.2655E+01	-	4.7400E+04	9.7598E+04	-	8.7699E+03	6.4876E+03
2.7998E+02	2.0767E+03	2.2537E+02	-	4.0629E+04	2.6673E+05	-	8.2827E+03	1.7114E+04
2.7998E+02	2.0118E+03	7.7248E+00	-	3.3857E+04	5.8241E+05	-	7.7955E+03	2.1277E+04
2.7998E+02	1.9469E+03	4.3597E+01	-	2.7086E+04	1.3618E+06	-	7.3083E+03	7.0008E+04
2.7998E+02	1.8820E+03	2.7319E+01	-	2.0314E+04	2.7065E+06	-	6.8210E+03	1.2736E+05
2.7998E+02	1.8171E+03	4.7027E+01	-	1.3543E+04	4.5494E+06	-	6.3338E+03	2.1680E+05
2.7998E+02	1.7522E+03	5.8267E+01	-	6.7714E+03	8.1552E+06	-	5.8466E+03	3.5584E+05
2.7998E+02	1.6873E+03	5.2899E+01	-	0.0000E+00	1.6701E+07	-	5.3594E+03	4.2589E+05
2.7998E+02	1.6224E+03	1.5228E+02	-	3.0471E+05	1.3359E+00	-	4.8722E+03	6.6292E+05
2.7998E+02	1.5575E+03	4.0714E+02	-	2.9794E+05	5.3125E-02	-	4.3850E+03	8.8601E+05
2.7998E+02	1.4926E+03	2.3124E+02	-	2.9117E+05	4.4217E+00	-	3.8977E+03	9.9888E+05
2.7998E+02	1.4277E+03	3.0992E+02	-	2.8440E+05	1.0417E+01	-	3.4105E+03	1.2336E+06
2.7998E+02	1.3628E+03	5.9385E+02	-	2.7763E+05	4.4217E+00	-	2.9233E+03	1.4532E+06
2.7998E+02	1.2979E+03	7.4565E+02	-	2.7086E+05	1.4839E+01	-	2.4361E+03	1.5040E+06
2.7998E+02	1.2330E+03	1.6977E+03	-	2.5731E+05	3.5000E+00	-	1.9489E+03	1.4093E+06
2.7998E+02	1.1681E+03	1.7878E+03	-	2.5054E+05	2.1962E+01	-	1.4617E+03	1.4210E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.7998E+02	1.1032E+03	1.9118E+03	-	2.4377E+05	6.7967E+00	-	9.7443E+02	2.4822E+06
2.7998E+02	1.0383E+03	2.9220E+03	-	2.3700E+05	2.3750E+00	-	4.8722E+02	5.0114E+06
2.7998E+02	9.7345E+02	6.5506E+03	-	2.3023E+05	1.0623E+01	-	0.0000E+00	9.5349E+06
2.7998E+02	9.0855E+02	7.6956E+03	-	2.2346E+05	3.5000E+00	-	2.1438E+04	5.3125E-02
2.7998E+02	8.4365E+02	8.6036E+03	-	2.1669E+05	3.5000E+00	-	1.9976E+04	5.3125E-02
2.7998E+02	7.7876E+02	2.6900E+04	-	2.0991E+05	6.0042E+00	-	1.8514E+04	1.0948E+00
2.7998E+02	7.1386E+02	2.1841E+04	-	2.0314E+05	5.0932E+00	-	1.8027E+04	4.2913E-01
2.7998E+02	6.4896E+02	7.4172E+04	-	1.9637E+05	9.0870E+00	-	1.7540E+04	1.3067E+00
2.7998E+02	5.8407E+02	1.4128E+05	-	1.8960E+05	1.0710E+01	-	1.7053E+04	8.7757E-01
2.7998E+02	5.1917E+02	3.0645E+05	-	1.8283E+05	1.1764E+01	-	1.6565E+04	1.2675E-01
2.7998E+02	4.5427E+02	7.9707E+05	-	1.7606E+05	1.0198E+01	-	1.6078E+04	1.2050E+01
2.7998E+02	3.8938E+02	1.2331E+06	-	1.6929E+05	5.6282E-01	-	1.5591E+04	5.2196E+00
2.7998E+02	3.2448E+02	2.4773E+06	-	1.6251E+05	1.8815E+01	-	1.5104E+04	8.0395E-01
2.7998E+02	2.5959E+02	4.3906E+06	-	1.5574E+05	6.4372E+00	-	1.4617E+04	7.3620E-02
2.7998E+02	1.9469E+02	6.4576E+06	-	1.4897E+05	1.8849E+02	-	1.4129E+04	1.3993E+01
2.7998E+02	1.2979E+02	8.2407E+06	-	1.4220E+05	1.4467E+02	-	1.3642E+04	1.7650E+00
2.7998E+02	6.4896E+01	1.2350E+07	-	1.3543E+05	9.8420E+01	-	1.3155E+04	3.2804E+01
2.7998E+02	0.0000E+00	3.4945E+07	-	1.2866E+05	3.1801E+02	-	1.2668E+04	4.0813E+00
2.0856E+02	2.5310E+03	1.9625E+00	-	1.2189E+05	1.9456E+02	-	1.2180E+04	4.5074E+01
2.0856E+02	2.4661E+03	6.9585E+00	-	1.1511E+05	6.5309E+02	-	1.1693E+04	4.5889E+00
2.0856E+02	2.4012E+03	1.6175E+01	-	1.0834E+05	1.1604E+03	-	1.1206E+04	1.2002E+02
2.0856E+02	2.3363E+03	6.6506E+00	-	1.0157E+05	3.7021E+03	-	1.0719E+04	1.8177E+01
2.0856E+02	2.2714E+03	7.6366E+00	-	9.4800E+04	1.7114E+03	-	1.0232E+04	2.2112E+01
2.0856E+02	2.2065E+03	6.3842E+00	-	8.8029E+04	2.5384E+03	-	9.7443E+03	5.0017E+01
2.0856E+02	2.1416E+03	9.7037E+00	-	8.1257E+04	2.6167E+03	-	9.2571E+03	2.8720E+02
2.0856E+02	2.0767E+03	1.3546E+01	-	7.4486E+04	5.9516E+03	-	8.7699E+03	1.1380E+03
2.0856E+02	2.0118E+03	5.3784E+01	-	6.7714E+04	1.3866E+04	-	8.2827E+05	1.0139E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.0856E+02	1.9469E+03	2.7929E+01	-	6.0943E+04	2.5053E+04	-	7.7955E+03	2.3084E+03
2.0856E+02	1.8820E+03	3.9632E+01	-	5.4171E+04	5.4754E+04	-	7.3083E+03	1.8021E+04
2.0856E+02	1.8171E+03	6.6687E+00	-	4.7400E+04	1.3143E+05	-	6.8210E+03	2.0451E+04
2.0856E+02	1.7522E+03	4.8308E+01	-	4.0629E+04	3.4593E+05	-	6.3338E+03	5.6271E+04
2.0856E+02	1.6873E+03	1.1965E+01	-	3.3857E+04	7.6067E+05	-	5.8466E+03	1.0766E+05
2.0856E+02	1.6224E+03	6.4916E+01	-	2.7086E+04	1.6609E+06	-	5.3594E+03	1.7120E+05
2.0856E+02	1.5575E+03	6.2415E+01	-	2.0314E+04	2.7238E+06	-	4.8722E+03	3.0420E+05
2.0856E+02	1.4926E+03	1.7110E+02	-	1.3543E+04	3.6464E+06	-	4.3850E+03	5.0994E+05
2.0856E+02	1.4277E+03	1.0132E+02	-	6.7714E+03	7.1699E+06	-	3.8977E+03	5.3629E+05
2.0856E+02	1.3628E+03	2.1858E+02	-	0.0000E+00	1.0809E+07	-	3.4105E+03	7.5961E+05
2.0856E+02	1.2979E+03	6.5329E+01	-	2.9794E+05	5.2085E+00	-	2.9233E+03	8.9133E+05
2.0856E+02	1.2330E+03	2.3762E+02	-	2.8440E+05	1.3359E+00	-	2.4361E+03	7.6232E+05
2.0856E+02	1.1681E+03	2.4196E+02	-	2.7763E+05	1.7500E+00	-	1.9489E+03	8.3690E+05
2.0856E+02	1.1032E+03	5.4126E+02	-	2.7086E+05	1.3089E+01	-	1.4617E+03	7.0246E+05
2.0856E+02	1.0383E+03	2.9393E+02	-	2.6409E+05	5.7576E+00	-	9.7443E+02	1.4811E+06
2.0856E+02	9.7345E+02	2.3134E+03	-	2.5731E+05	8.9588E+00	-	4.8722E+02	3.2699E+06
2.0856E+02	9.0855E+02	2.2581E+03	-	2.5054E+05	3.1390E+00	-	0.0000E+00	6.4465E+06
2.0856E+02	8.4365E+02	2.5607E+03	-	2.4377E+05	7.8802E+00	-	1.9489E+04	4.2913E-01
2.0856E+02	7.7876E+02	3.5889E+03	-	2.3700E+05	5.2085E+00	-	1.8514E+04	1.4724E-01
2.0856E+02	7.1386E+02	3.1964E+04	-	2.3023E+05	4.4217E+00	-	1.7540E+04	9.3722E+00
2.0856E+02	6.4896E+02	3.2515E+04	-	2.2346E+05	3.0115E+01	-	1.7053E+04	9.5119E-01
2.0856E+02	5.8407E+02	6.8916E+04	-	2.1669E+05	1.6400E+01	-	1.6565E+04	8.0395E-01
2.0856E+02	5.1917E+02	1.4629E+05	-	2.0991E+05	1.4087E+01	-	1.6078E+04	8.0395E-01
2.0856E+02	4.5427E+02	4.0916E+05	-	2.0314E+05	2.2393E+01	-	1.5591E+04	8.3435E+01
2.0856E+02	3.8938E+02	7.3969E+05	-	1.9637E+05	2.6074E+01	-	1.5104E+04	1.3597E+01
2.0856E+02	3.2448E+02	1.9218E+06	-	1.8960E+05	6.2500E-01	-	1.4129E+04	2.2145E+00
2.0856E+02	2.5959E+02	3.9968E+06	-	1.8283E+05	4.8920E-01	-	1.3642E+04	0.2500E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.0856E+02	1.9469E+02	8.1919E+06	-	1.7606E+05	2.8500E+00	-	1.3155E+04	2.0488E+00
2.0856E+02	1.2979E+02	1.2282E+07	-	1.6929E+05	7.8152E-01	-	1.2668E+04	8.7550E+00
2.0856E+02	6.4896E+01	1.9763E+07	-	1.6251E+05	7.2810E+00	-	1.2180E+04	5.3125E-02
2.0856E+02	0.0000E+00	4.9348E+07	-	1.5574E+05	7.6958E+01	-	1.1693E+04	2.0037E-01
1.3714E+02	3.2448E+03	1.0625E-01	-	1.4897E+05	5.8740E+01	-	1.1206E+04	8.0858E-01
1.3714E+02	2.6608E+03	1.3359E+00	-	1.4220E+05	1.7827E+02	-	1.0719E+04	4.7367E+00
1.3714E+02	2.5959E+03	5.3125E-02	-	1.3543E+05	3.9013E+02	-	1.0232E+04	3.1062E+00
1.3714E+02	2.5310E+03	1.3359E+00	-	1.2866E+05	1.1876E+02	-	9.7443E+03	2.6074E+02
1.3714E+02	2.4661E+03	1.8031E+00	-	1.2189E+05	6.3671E+02	-	9.2571E+03	1.3392E+01
1.3714E+02	2.4012E+03	5.3125E-02	-	1.1511E+05	5.9415E+02	-	8.7699E+03	2.0844E+02
1.3714E+02	2.3363E+03	2.7248E+00	-	1.0834E+05	3.1162E+03	-	8.2827E+03	8.6991E+01
1.3714E+02	2.2714E+03	1.0625E-01	-	1.0157E+05	6.6398E+03	-	7.7955E+03	2.4052E+02
1.3714E+02	2.2065E+03	2.2766E+01	-	9.4800E+04	1.6715E+03	-	7.3083E+03	4.2180E+03
1.3714E+02	2.1416E+03	9.5838E+00	-	8.8029E+04	3.1489E+03	-	6.8210E+03	5.7130E+03
1.3714E+02	2.0767E+03	2.5875E+00	-	8.1257E+04	4.9895E+03	-	6.3338E+03	1.2828E+04
1.3714E+02	2.0118E+03	1.8563E+00	-	7.4486E+04	1.0272E+04	-	5.8466E+03	1.2600E+04
1.3714E+02	1.9469E+03	7.8438E-01	-	6.7714E+04	2.1223E+04	-	5.3594E+03	5.4694E+04
1.3714E+02	1.8820E+03	1.0523E+01	-	6.0943E+04	4.5376E+04	-	4.8722E+03	7.1332E+04
1.3714E+02	1.8171E+03	4.6678E+01	-	5.4171E+04	6.3257E+04	-	4.3850E+03	1.2672E+05
1.3714E+02	1.7522E+03	1.1181E+01	-	4.7400E+04	1.5372E+05	-	3.8977E+03	2.4879E+05
1.3714E+02	1.6873E+03	6.2608E+01	-	4.0629E+04	4.3670E+05	-	3.4105E+03	2.8832E+05
1.3714E+02	1.6224E+03	4.7583E+01	-	3.3857E+04	7.9372E+05	-	2.9233E+03	3.5575E+05
1.3714E+02	1.5575E+03	5.4019E+01	-	2.7086E+04	1.5057E+06	-	2.4361E+03	4.6387E+05
1.3714E+02	1.4926E+03	7.8077E+01	-	2.0314E+04	2.7550E+06	-	1.9489E+03	4.4797E+05
1.3714E+02	1.4277E+03	6.8003E+01	-	1.3543E+04	4.1747E+06	-	1.4617E+03	5.0889E+05
1.3714E+02	1.3628E+03	1.1682E+02	-	6.7714E+03	6.7206E+06	-	9.7443E+02	8.2398E+05
1.3714E+02	1.2979E+03	1.9585E+02	-	0.0000E+00	9.5072E+06	-	4.8722E+02	1.0091E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.3714E+02	1.2330E+03	1.9089E+02	-	2.5731E+05	3.0859E+00	-	0.0000E+00	3.9618E+06
1.3714E+02	1.1681E+03	2.8210E+02	-	2.5054E+05	1.3359E+00	-	1.8027E+04	4.8225E-01
1.3714E+02	1.1032E+03	3.2304E+02	-	2.4377E+05	1.3359E+00	-	1.5591E+04	8.7757E-01
1.3714E+02	1.0383E+03	2.8661E+02	-	2.3700E+05	7.9333E+00	-	1.5104E+04	1.4724E-01
1.3714E+02	9.7345E+02	8.6222E+02	-	2.3023E+05	1.3406E+01	-	1.3642E+04	5.3125E-02
1.3714E+02	9.0855E+02	1.1270E+03	-	2.2346E+05	7.8617E+00	-	1.3155E+04	6.2500E-01
1.3714E+02	8.4365E+02	3.5309E+03	-	2.1669E+05	3.3798E+00	-	1.2180E+04	1.3511E+00
1.3714E+02	7.7876E+02	6.8419E+03	-	2.0991E+05	6.7132E+00	-	1.1693E+04	3.4703E-01
1.3714E+02	7.1386E+02	1.1332E+04	-	2.0314E+05	1.5602E+01	-	1.1206E+04	1.9609E+00
1.3714E+02	6.4896E+02	2.1422E+04	-	1.8960E+05	4.2674E+01	-	1.0719E+04	2.0140E+00
1.3714E+02	5.8407E+02	5.7821E+04	-	1.8283E+05	1.2193E+01	-	1.0232E+04	6.7817E+00
1.3714E+02	5.1917E+02	1.0063E+05	-	1.7606E+05	7.1254E+00	-	9.7443E+03	2.1264E+00
1.3714E+02	4.5427E+02	2.7507E+05	-	1.6929E+05	2.5655E+01	-	9.2571E+03	1.1527E+00
1.3714E+02	3.8938E+02	7.5391E+05	-	1.6251E+05	2.3429E+01	-	8.7699E+03	2.2037E+01
1.3714E+02	3.2448E+02	1.6790E+06	-	1.5574E+05	2.9457E+01	-	8.2827E+03	3.1155E+00
1.3714E+02	2.5959E+02	3.7970E+06	-	1.4897E+05	2.8011E+02	-	7.7955E+03	5.0998E+01
1.3714E+02	1.9469E+02	8.2061E+06	-	1.4220E+05	1.3840E+02	-	7.3083E+03	4.0420E+01
1.3714E+02	1.2979E+02	1.3040E+07	-	1.3543E+05	4.7439E+02	-	6.8210E+03	3.2221E+01
1.3714E+02	6.4896E+01	1.8977E+07	-	1.2866E+05	2.6148E+03	-	6.3338E+03	6.1820E+02
1.3714E+02	0.0000E+00	4.9403E+07	-	1.2189E+05	3.0709E+03	-	5.8466E+03	1.3585E+03
6.5724E+01	2.9203E+03	6.2500E-01	-	1.1511E+05	5.8514E+03	-	5.3594E+03	8.4748E+02
6.5724E+01	2.3363E+03	1.3890E+00	-	1.0834E+05	1.6694E+03	-	4.8722E+03	1.3549E+04
6.5724E+01	2.2714E+03	3.5000E+00	-	1.0157E+05	8.6046E+03	-	4.3850E+03	1.6817E+04
6.5724E+01	2.2065E+03	1.8563E+00	-	9.4800E+04	1.9143E+04	-	3.8977E+03	4.3459E+04
6.5724E+01	2.1416E+03	3.0859E+00	-	8.8029E+04	3.4650E+04	-	3.4105E+03	6.6846E+04
6.5724E+01	2.0767E+03	1.5938E-01	-	8.1257E+04	1.8798E+04	-	2.9233E+03	1.0934E+05
6.5724E+01	2.0118E+03	1.5299E+01	-	7.4486E+04	3.9519E+04	-	2.4361E+05	9.1409E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.5724E+01	1.9469E+03	5.3125E-02	-	6.7714E+04	2.5800E+04	-	1.9489E+03	1.5951E+05
6.5724E+01	1.8820E+03	1.9094E+00	-	6.0943E+04	4.0809E+04	-	1.4617E+03	2.0623E+05
6.5724E+01	1.8171E+03	6.7298E-01	-	5.4171E+04	7.6802E+04	-	9.7443E+02	3.0788E+05
6.5724E+01	1.7522E+03	5.3125E-02	-	4.7400E+04	1.1759E+05	-	4.8722E+02	9.8662E+05
6.5724E+01	1.6873E+03	8.9063E-01	-	4.0629E+04	2.9296E+05	-	0.0000E+00	2.0704E+06
6.5724E+01	1.6224E+03	1.0817E+01	-	3.3857E+04	7.5840E+05	-	1.5104E+04	1.0417E+00
6.5724E+01	1.5575E+03	1.4689E+01	-	2.7086E+04	1.6169E+06	-	1.4617E+04	5.3125E-02
6.5724E+01	1.4926E+03	3.3561E+01	-	2.0314E+04	3.1303E+06	-	1.3642E+04	1.0625E-01
6.5724E+01	1.4277E+03	2.1100E+01	-	1.3543E+04	4.7356E+06	-	1.2668E+04	2.9390E-01
6.5724E+01	1.3628E+03	3.2959E+01	-	6.7714E+03	6.8791E+06	-	1.1206E+04	2.0140E+00
6.5724E+01	1.2979E+03	3.2615E+01	-	0.0000E+00	1.0770E+07	-	1.0719E+04	1.0625E-01
6.5724E+01	1.2330E+03	3.3840E+01	-	2.7086E+05	1.3359E+00	-	8.7699E+03	2.9448E-01
6.5724E+01	1.1681E+03	3.4567E+01	-	2.5731E+05	2.6717E+00	-	8.2827E+03	1.8614E+00
6.5724E+01	1.1032E+03	3.7343E+01	-	2.5054E+05	1.3359E+00	-	7.7955E+03	4.5869E+00
6.5724E+01	1.0383E+03	1.1944E+02	-	2.4377E+05	4.0076E+00	-	7.3083E+03	5.1364E+01
6.5724E+01	9.7345E+02	1.4139E+02	-	2.3700E+05	2.7467E+00	-	6.8210E+03	1.6412E+01
6.5724E+01	9.0855E+02	1.5650E+02	-	2.3023E+05	2.8300E+00	-	6.3338E+03	5.6990E+00
6.5724E+01	8.4365E+02	1.1512E+04	-	2.2346E+05	4.9785E+00	-	5.8466E+03	5.5306E+00
6.5724E+01	7.7876E+02	2.4742E+03	-	2.1669E+05	4.9139E+00	-	5.3594E+03	2.1740E+02
6.5724E+01	7.1386E+02	9.2514E+03	-	2.0314E+05	1.0010E+01	-	4.8722E+03	3.1740E+02
6.5724E+01	6.4896E+02	3.5736E+04	-	1.9637E+05	3.7119E+01	-	4.3850E+03	4.6263E+02
6.5724E+01	5.8407E+02	1.3460E+04	-	1.8960E+05	1.8408E+01	-	3.8977E+03	4.1649E+03
6.5724E+01	5.1917E+02	7.1530E+04	-	1.8283E+05	4.9691E+01	-	3.4105E+03	3.7819E+03
6.5724E+01	4.5427E+02	1.1350E+05	-	1.7606E+05	7.4985E+00	-	2.9233E+03	3.5656E+03
6.5724E+01	3.8938E+02	3.0205E+05	-	1.6929E+05	1.3614E+02	-	2.4361E+03	1.9105E+04
6.5724E+01	3.2448E+02	7.2243E+05	-	1.6251E+05	2.5468E+02	-	1.9489E+03	2.3212E+04
6.5724E+01	2.5959E+02	1.6047E+06	-	1.5574E+05	6.6505E+01	-	1.4617E+05	5.2037E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.5724E+01	1.9469E+02	2.7397E+06	-	1.4897E+05	6.4910E+02	-	9.7443E+02	1.0398E+05
6.5724E+01	1.2979E+02	4.2622E+06	-	1.4220E+05	5.4205E+02	-	4.8722E+02	2.3144E+05
6.5724E+01	6.4896E+01	8.9716E+06	-	1.3543E+05	3.4576E+02	-	0.0000E+00	7.2970E+05
6.5724E+01	0.0000E+00	2.8611E+07	-	1.2866E+05	5.8022E+03	-	1.7540E+04	6.2500E-01
-	2.7256E+03	1.8031E+00	-	1.2189E+05	1.5419E+03	-	1.6565E+04	5.3125E-02
-	2.5959E+03	1.3359E+00	-	1.1511E+05	6.8419E+03	-	1.5104E+04	1.0625E-01
-	2.3363E+03	5.3125E-02	-	1.0834E+05	5.0693E+03	-	1.4617E+04	5.3125E-02
-	2.1416E+03	5.3125E-02	-	1.0157E+05	8.1287E+03	-	9.7443E+03	1.0625E-01
-	1.8171E+03	1.7500E+00	-	9.4800E+04	1.9075E+04	-	9.2571E+03	2.1250E-01
-	1.6873E+03	3.8272E+00	-	8.8029E+04	2.4078E+04	-	8.2827E+03	4.8156E-01
-	1.6224E+03	1.5938E-01	-	8.1257E+04	2.4400E+04	-	7.7955E+03	4.3471E+00
-	1.5575E+03	1.0625E-01	-	7.4486E+04	3.7497E+04	-	7.3083E+03	5.4353E+01
-	1.4926E+03	5.4176E+00	-	6.7714E+04	3.9425E+04	-	6.8210E+03	1.0384E+01
-	1.4277E+03	8.3542E+00	-	6.0943E+04	3.4177E+04	-	6.3338E+03	5.8897E+00
-	1.3628E+03	4.8998E+00	-	5.4171E+04	6.9858E+04	-	5.8466E+03	7.2975E+00
-	1.2979E+03	3.4002E+00	-	4.7400E+04	1.2923E+05	-	5.3594E+03	6.5361E+01
-	1.2330E+03	1.8229E+01	-	4.0629E+04	2.0151E+05	-	4.8722E+03	7.9255E+01
-	1.1681E+03	1.5851E+01	-	3.3857E+04	4.4595E+05	-	4.3850E+03	1.3630E+03
-	1.1032E+03	2.5946E+01	-	2.7086E+04	1.3845E+06	-	3.8977E+03	3.9039E+02
-	1.0383E+03	6.6687E+01	-	2.0314E+04	2.6021E+06	-	3.4105E+03	3.3078E+02
-	9.7345E+02	3.7206E+01	-	1.3543E+04	4.0577E+06	-	2.9233E+03	1.7943E+03
-	9.0855E+02	9.5279E+01	-	6.7714E+03	5.7514E+06	-	2.4361E+03	1.7945E+03
-	8.4365E+02	1.5613E+04	-	0.0000E+00	1.2195E+07	-	1.9489E+03	4.4238E+03
-	7.7876E+02	2.6029E+04	-	2.5731E+05	1.3359E+00	-	1.4617E+03	7.6187E+03
-	7.1386E+02	5.7324E+04	-	2.3023E+05	1.3359E+00	-	9.7443E+02	2.2028E+04
-	6.4896E+02	7.6208E+04	-	2.1669E+05	1.9001E+00	-	4.8722E+02	8.4076E+04
-	5.8407E+02	1.1588E+05	-	2.0991E+05	1.4109E+00	-	0.0000E+00	2.7237E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-	5.1917E+02	1.3661E+05	-	2.0314E+05	1.0115E+01	-	2.4361E+04	5.3125E-02
5.6946E+00	5.1917E+02	1.3661E+05	7.5376E+04	2.0314E+05	1.0115E+01	6.0824E+03	2.4361E+04	5.3125E-02
-	4.5427E+02	1.2036E+05	-	1.9637E+05	2.1238E+01	-	1.4129E+04	5.3125E-02
5.6946E+00	4.5427E+02	1.2036E+05	7.5376E+04	1.9637E+05	2.1238E+01	6.0824E+03	1.4129E+04	5.3125E-02
-	3.8938E+02	2.1687E+05	-	1.8960E+05	4.7773E+00	-	8.7699E+03	1.0625E-01
5.6946E+00	3.8938E+02	2.1687E+05	7.5376E+04	1.8960E+05	4.7773E+00	6.0824E+03	8.7699E+03	1.0625E-01
-	3.2448E+02	3.6530E+05	-	1.8283E+05	1.9225E+01	-	7.7955E+03	1.0625E-01
5.6946E+00	3.2448E+02	3.6530E+05	7.5376E+04	1.8283E+05	1.9225E+01	6.0824E+03	7.7955E+03	1.0625E-01
-	2.5959E+02	7.5965E+05	-	1.7606E+05	2.8665E+00	-	7.3083E+03	5.3729E+00
5.6946E+00	2.5959E+02	7.5965E+05	7.5376E+04	1.7606E+05	2.8665E+00	6.0824E+03	7.3083E+03	5.3729E+00
-	1.9469E+02	1.6447E+06	-	1.6929E+05	2.1775E+02	-	6.8210E+03	1.3356E+01
5.6946E+00	1.9469E+02	1.6447E+06	7.5376E+04	1.6929E+05	2.1775E+02	6.0824E+03	6.8210E+03	1.3356E+01
-	1.2979E+02	4.4479E+06	-	1.6251E+05	2.8665E+00	-	6.3338E+03	8.5826E-01
5.6946E+00	1.2979E+02	4.4479E+06	7.5376E+04	1.6251E+05	2.8665E+00	6.0824E+03	6.3338E+03	8.5826E-01
-	6.4896E+01	1.1249E+07	-	1.5574E+05	3.4507E+02	-	5.8466E+03	6.5402E+00
5.6946E+00	6.4896E+01	1.1249E+07	7.5376E+04	1.5574E+05	3.4507E+02	6.0824E+03	5.8466E+03	6.5402E+00
-	0.0000E+00	2.9894E+07	-	1.4897E+05	3.5643E+02	-	5.3594E+03	3.8250E+02
5.6946E+00	0.0000E+00	2.9894E+07	7.5376E+04	1.4897E+05	3.5643E+02	6.0824E+03	5.3594E+03	3.8250E+02
-	2.5959E+03	1.3359E+00	-	1.4220E+05	2.6296E+03	-	4.8722E+03	5.5408E+00
7.7114E+01	2.5959E+03	1.3359E+00	7.5376E+04	1.4220E+05	2.6296E+03	6.0824E+03	4.8722E+03	5.5408E+00
-	1.9469E+03	1.8031E+00	-	1.3543E+05	4.7369E+02	-	4.3850E+03	2.4662E+00
7.7114E+01	1.9469E+03	1.8031E+00	7.5376E+04	1.3543E+05	4.7369E+02	6.0824E+03	4.3850E+03	2.4662E+00
-	1.8820E+03	5.3125E-02	-	1.2866E+05	2.1194E+03	-	3.8977E+03	4.4921E+00
7.7114E+01	1.8820E+03	5.3125E-02	7.5376E+04	1.2866E+05	2.1194E+03	6.0824E+03	3.8977E+03	4.4921E+00
-	1.8171E+03	1.8563E+00	-	1.2189E+05	1.6097E+03	-	3.4105E+03	1.6627E+01
7.7114E+01	1.8171E+03	1.8563E+00	7.5376E+04	1.2189E+05	1.6097E+03	6.0824E+03	3.4105E+03	1.6627E+01
-	1.6873E+03	1.3031E+00	-	1.1511E+05	6.3920E+03	-	2.9233E+03	9.9732E+00
7.7114E+01	1.6873E+03	1.3031E+00	7.5376E+04	1.1511E+05	6.3920E+03	6.0824E+03	2.9233E+03	9.9732E+00
-	1.6224E+03	1.5938E-01	-	1.0834E+05	1.7525E+04	-	2.4361E+03	6.0920E+01
7.7114E+01	1.6224E+03	1.5938E-01	7.5376E+04	1.0834E+05	1.7525E+04	6.0824E+03	2.4361E+03	6.0920E+01
-	1.5575E+03	1.0113E+01	-	1.0157E+05	7.0718E+03	-	1.9489E+03	2.7834E+02
7.7114E+01	1.5575E+03	1.0113E+01	7.5376E+04	1.0157E+05	7.0718E+03	6.0824E+03	1.9489E+03	2.7834E+02
-	1.4926E+03	1.0815E+01	-	9.4800E+04	1.5984E+04	-	1.4617E+03	7.7508E+02
7.7114E+01	1.4926E+03	1.0815E+01	7.5376E+04	9.4800E+04	1.5984E+04	6.0824E+03	1.4617E+03	7.7508E+02
-	1.4277E+03	3.6062E+00	-	8.8029E+04	1.7420E+04	-	9.7443E+02	9.0232E+03
7.7114E+01	1.4277E+03	3.6062E+00	7.5376E+04	8.8029E+04	1.7420E+04	6.0824E+03	9.7443E+02	9.0232E+03
-	1.3628E+03	1.0933E+01	-	8.1257E+04	5.4387E+04	-	4.8722E+02	1.3604E+04
7.7114E+01	1.3628E+03	1.0933E+01	7.5376E+04	8.1257E+04	5.4387E+04	6.0824E+03	4.8722E+02	1.3604E+04
-	1.2979E+03	1.4264E+01	-	7.4486E+04	4.8538E+04	-	0.0000E+00	4.6991E+04
7.7114E+01	1.2979E+03	1.4264E+01	7.5376E+04	7.4486E+04	4.8538E+04	6.0824E+03	0.0000E+00	4.6991E+04
-	1.2330E+03	1.2545E+01	-	6.7714E+04	7.8282E+04	-	1.5591E+04	6.2500E-01
7.7114E+01	1.2330E+03	1.2545E+01	7.5376E+04	6.7714E+04	7.8282E+04	6.6531E+03	1.5591E+04	6.2500E-01
-	1.1681E+03	3.7440E+01	-	6.0943E+04	1.1881E+05	-	1.0719E+04	1.0625E-01
7.7114E+01	1.1681E+03	3.7440E+01	7.5376E+04	6.0943E+04	1.1881E+05	6.6531E+03	1.0719E+04	1.0625E-01
-	1.1032E+03	5.2588E+01	-	5.4171E+04	1.7579E+05	-	6.8210E+03	5.0000E+00
7.7114E+01	1.1032E+03	5.2588E+01	7.5376E+04	5.4171E+04	1.7579E+05	6.6531E+03	6.8210E+03	5.0000E+00
-	1.0383E+03	3.9911E+01	-	4.7400E+04	2.1775E+05	-	6.3338E+03	1.3358E+01
7.7114E+01	1.0383E+03	3.9911E+01	7.5376E+04	4.7400E+04	2.1775E+05	6.6531E+03	6.3338E+03	1.3358E+01
-	9.7345E+02	8.9720E+01	-	4.0629E+04	3.2327E+05	-	5.8466E+03	4.8156E-01
7.7114E+01	9.7345E+02	8.9720E+01	7.5376E+04	4.0629E+04	3.2327E+05	6.6531E+03	5.8466E+03	4.8156E-01
-	9.0855E+02	8.3120E+01	-	3.3857E+04	5.7791E+05	-	5.3594E+03	3.3555E+01
7.7114E+01	9.0855E+02	8.3120E+01	7.5376E+04	3.3857E+04	5.7791E+05	6.6531E+03	5.3594E+03	3.3555E+01
-	8.4365E+02	1.3058E+02	-	2.7086E+04	1.3047E+06	-	4.8722E+05	9.5194E+00
7.7114E+01	8.4365E+02	1.3058E+02	7.5376E+04	2.7086E+04	1.3047E+06	6.6531E+03	4.8722E+05	9.5194E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-	7.7876E+02	1.4937E+02	-	2.0314E+04	2.8835E+06	-	4.3850E+03	5.0698E-01
7.7114E+01	7.7876E+02	1.4937E+02	7.5376E+04	2.0314E+04	2.8835E+06	6.6531E+03	4.3850E+03	5.0698E-01
-	7.1386E+02	1.0473E+04	-	1.3543E+04	4.4791E+06	-	3.8977E+03	2.3216E+01
7.7114E+01	7.1386E+02	1.0473E+04	7.5376E+04	1.3543E+04	4.4791E+06	6.6531E+03	3.8977E+03	2.3216E+01
-	6.4896E+02	2.9438E+02	-	6.7714E+03	5.9010E+06	-	3.4105E+03	1.3627E+01
7.7114E+01	6.4896E+02	2.9438E+02	7.5376E+04	6.7714E+03	5.9010E+06	6.6531E+03	3.4105E+03	1.3627E+01
-	5.8407E+02	5.4457E+03	-	0.0000E+00	1.5135E+07	-	2.9233E+03	5.3840E+01
7.7114E+01	5.8407E+02	5.4457E+03	7.5376E+04	0.0000E+00	1.5135E+07	6.6531E+03	2.9233E+03	5.3840E+01
-	5.1917E+02	3.7924E+02	-	2.3700E+05	1.3359E+00	-	2.4361E+03	4.6419E+01
7.7114E+01	5.1917E+02	3.7924E+02	8.3338E+04	2.3700E+05	1.3359E+00	6.6531E+03	2.4361E+03	4.6419E+01
-	4.5427E+02	9.1344E+03	-	2.0991E+05	2.8300E+00	-	1.9489E+03	2.0540E+02
7.7114E+01	4.5427E+02	9.1344E+03	8.3338E+04	2.0991E+05	2.8300E+00	6.6531E+03	1.9489E+03	2.0540E+02
-	3.8938E+02	1.6453E+04	-	1.9637E+05	1.9905E+02	-	1.4617E+03	4.8445E+01
7.7114E+01	3.8938E+02	1.6453E+04	8.3338E+04	1.9637E+05	1.9905E+02	6.6531E+03	1.4617E+03	4.8445E+01
-	3.2448E+02	8.0289E+03	-	1.8960E+05	1.6833E+02	-	9.7443E+02	2.4220E+02
7.7114E+01	3.2448E+02	8.0289E+03	8.3338E+04	1.8960E+05	1.6833E+02	6.6531E+03	9.7443E+02	2.4220E+02
-	2.5959E+02	2.2377E+04	-	1.8283E+05	9.4253E+01	-	4.8722E+02	1.8581E+03
7.7114E+01	2.5959E+02	2.2377E+04	8.3338E+04	1.8283E+05	9.4253E+01	6.6531E+03	4.8722E+02	1.8581E+03
-	1.9469E+02	8.1588E+04	-	1.7606E+05	2.0266E+01	-	0.0000E+00	1.2028E+04
7.7114E+01	1.9469E+02	8.1588E+04	8.3338E+04	1.7606E+05	2.0266E+01	6.6531E+03	0.0000E+00	1.2028E+04
-	1.2979E+02	3.5438E+05	-	1.6929E+05	1.4332E+01	-	1.0232E+04	1.0625E-01
7.7114E+01	1.2979E+02	3.5438E+05	8.3338E+04	1.6929E+05	1.4332E+01	7.2238E+03	1.0232E+04	1.0625E-01
-	6.4896E+01	1.4746E+06	-	1.6251E+05	9.9555E+01	-	9.7443E+03	1.0625E-01
7.7114E+01	6.4896E+01	1.4746E+06	8.3338E+04	1.6251E+05	9.9555E+01	7.2238E+03	9.7443E+03	1.0625E-01
-	0.0000E+00	5.1965E+06	-	1.5574E+05	7.3029E+02	-	8.2827E+03	1.6672E+02
7.7114E+01	0.0000E+00	5.1965E+06	8.3338E+04	1.5574E+05	7.3029E+02	7.2238E+03	8.2827E+03	1.6672E+02
-	2.4661E+03	5.3125E-02	-	1.4897E+05	2.2689E+03	-	6.8210E+03	1.7961E+01
1.4853E+02	2.4661E+03	5.3125E-02	8.3338E+04	1.4897E+05	2.2689E+03	7.2238E+03	6.8210E+03	1.7961E+01
-	1.9469E+03	5.3125E-02	-	1.4220E+05	1.4990E+03	-	5.8466E+03	1.7551E+00
1.4853E+02	1.9469E+03	5.3125E-02	8.3338E+04	1.4220E+05	1.4990E+03	7.2238E+03	5.8466E+03	1.7551E+00
-	1.8820E+03	1.7500E+00	-	1.3543E+05	3.2876E+03	-	5.3594E+03	7.1110E+00
1.4853E+02	1.8820E+03	1.7500E+00	8.3338E+04	1.3543E+05	3.2876E+03	7.2238E+03	5.3594E+03	7.1110E+00
-	1.8171E+03	1.7500E+00	-	1.2866E+05	3.3738E+03	-	4.8722E+03	2.4662E+00
1.4853E+02	1.8171E+03	1.7500E+00	8.3338E+04	1.2866E+05	3.3738E+03	7.2238E+03	4.8722E+03	2.4662E+00
-	1.7522E+03	1.0625E-01	-	1.2189E+05	3.6914E+03	-	4.3850E+03	5.7425E+00
1.4853E+02	1.7522E+03	1.0625E-01	8.3338E+04	1.2189E+05	3.6914E+03	7.2238E+03	4.3850E+03	5.7425E+00
-	1.6873E+03	1.3359E+00	-	1.1511E+05	8.6985E+03	-	3.8977E+03	4.2408E+00
1.4853E+02	1.6873E+03	1.3359E+00	8.3338E+04	1.1511E+05	8.6985E+03	7.2238E+03	3.8977E+03	4.2408E+00
-	1.6224E+03	2.6717E+00	-	1.0834E+05	1.3342E+04	-	3.4105E+03	3.6362E+00
1.4853E+02	1.6224E+03	2.6717E+00	8.3338E+04	1.0834E+05	1.3342E+04	7.2238E+03	3.4105E+03	3.6362E+00
-	1.5575E+03	1.3031E+00	-	1.0157E+05	1.9208E+04	-	2.9233E+03	8.5826E-01
1.4853E+02	1.5575E+03	1.3031E+00	8.3338E+04	1.0157E+05	1.9208E+04	7.2238E+03	2.9233E+03	8.5826E-01
-	1.4926E+03	3.6250E+00	-	9.4800E+04	2.3274E+04	-	2.4361E+03	1.3446E+01
1.4853E+02	1.4926E+03	3.6250E+00	8.3338E+04	9.4800E+04	2.3274E+04	7.2238E+03	2.4361E+03	1.3446E+01
-	1.4277E+03	2.0121E+01	-	8.8029E+04	5.6966E+04	-	1.9489E+03	6.1777E+01
1.4853E+02	1.4277E+03	2.0121E+01	8.3338E+04	8.8029E+04	5.6966E+04	7.2238E+03	1.9489E+03	6.1777E+01
-	1.3628E+03	6.5858E+00	-	8.1257E+04	9.4223E+04	-	1.4617E+03	2.5603E+01
1.4853E+02	1.3628E+03	6.5858E+00	8.3338E+04	8.1257E+04	9.4223E+04	7.2238E+03	1.4617E+03	2.5603E+01
-	1.2979E+03	6.7855E+00	-	7.4486E+04	1.0723E+05	-	9.7443E+02	1.8654E+02
1.4853E+02	1.2979E+03	6.7855E+00	8.3338E+04	7.4486E+04	1.0723E+05	7.2238E+03	9.7443E+02	1.8654E+02
-	1.2330E+03	3.0859E+00	-	6.7714E+04	1.6557E+05	-	4.8722E+02	3.1341E+02
1.4853E+02	1.2330E+03	3.0859E+00	8.3338E+04	6.7714E+04	1.6557E+05	7.2238E+03	4.8722E+02	3.1341E+02
-	1.1681E+03	9.8825E+00	-	6.0943E+04	2.7318E+05	-	0.0000E+00	5.1805E+02
1.4853E+02	1.1681E+03	9.8825E+00	8.3338E+04	6.0943E+04	2.7318E+05	7.2238E+03	0.0000E+00	5.1805E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
1.4853E+02	1.1032E+03	2.5028E+01	8.3338E+04	5.4171E+04	3.5117E+05	7.7944E+03	2.0463E+04	5.3125E-02
-			-			-		
1.4853E+02	1.0383E+03	7.0030E+01	8.3338E+04	4.7400E+04	4.8291E+05	7.7944E+03	6.3338E+03	9.3722E+00
-			-			-		
1.4853E+02	9.7345E+02	3.9010E+01	8.3338E+04	4.0629E+04	6.8196E+05	7.7944E+03	5.8466E+03	9.6451E-01
-			-			-		
1.4853E+02	9.0855E+02	5.3800E+01	8.3338E+04	3.3857E+04	9.6184E+05	7.7944E+03	3.4105E+03	3.7059E+00
-			-			-		
1.4853E+02	8.4365E+02	4.2515E+01	8.3338E+04	2.7086E+04	1.6722E+06	7.7944E+03	2.9233E+03	9.3722E+00
-			-			-		
1.4853E+02	7.7876E+02	8.2564E+01	8.3338E+04	2.0314E+04	2.9883E+06	7.7944E+03	2.4361E+03	1.0625E-01
-			-			-		
1.4853E+02	7.1386E+02	8.3642E+01	8.3338E+04	1.3543E+04	3.7338E+06	7.7944E+03	1.9489E+03	1.8035E+01
-			-			-		
1.4853E+02	6.4896E+02	1.6000E+02	8.3338E+04	6.7714E+03	4.9222E+06	7.7944E+03	1.4617E+03	9.5847E+00
-			-			-		
1.4853E+02	5.8407E+02	1.1832E+02	8.3338E+04	0.0000E+00	1.4459E+07	7.7944E+03	9.7443E+02	5.3739E+01
-			-			-		
1.4853E+02	5.1917E+02	1.7278E+02	9.1300E+04	2.0314E+05	4.7773E+00	7.7944E+03	4.8722E+02	6.0163E+01
-			-			-		
1.4853E+02	4.5427E+02	2.7984E+02	9.1300E+04	1.8283E+05	5.2170E+01	7.7944E+03	0.0000E+00	7.4630E+02
-			-			-		
1.4853E+02	3.8938E+02	1.9779E+03	9.1300E+04	1.7606E+05	2.2504E+03	8.3651E+03	7.3083E+03	2.1250E-01
-			-			-		
1.4853E+02	3.2448E+02	3.3504E+02	9.1300E+04	1.6929E+05	1.8894E+03	8.3651E+03	4.8722E+03	9.6451E-01
-			-			-		
1.4853E+02	2.5959E+02	1.4172E+04	9.1300E+04	1.6251E+05	5.5542E+02	8.3651E+03	3.8977E+03	8.5826E-01
-			-			-		
1.4853E+02	1.9469E+02	1.1033E+04	9.1300E+04	1.5574E+05	9.0186E+02	8.3651E+03	3.4105E+03	1.4724E-01
-			-			-		
1.4853E+02	1.2979E+02	1.4947E+05	9.1300E+04	1.4897E+05	6.7773E+02	8.3651E+03	2.4361E+03	4.2818E+00
-			-			-		
1.4853E+02	6.4896E+01	2.2324E+05	9.1300E+04	1.4220E+05	7.0403E+02	8.3651E+03	1.9489E+03	1.0230E+01
-			-			-		
1.4853E+02	0.0000E+00	5.0308E+05	9.1300E+04	1.3543E+05	3.3982E+03	8.3651E+03	1.4617E+03	1.5035E+00
-			-			-		
2.1995E+02	1.6873E+03	2.6717E+00	9.1300E+04	1.2866E+05	5.9138E+03	8.3651E+03	9.7443E+02	2.0842E+01
-			-			-		
2.1995E+02	1.6224E+03	6.1717E+00	9.1300E+04	1.2189E+05	6.3058E+03	8.3651E+03	4.8722E+02	3.1672E+01
-			-			-		
2.1995E+02	1.4926E+03	6.6793E+00	9.1300E+04	1.1511E+05	1.9195E+04	8.3651E+03	0.0000E+00	7.7491E+01
-			-			-		
2.1995E+02	1.4277E+03	1.5938E-01	9.1300E+04	1.0834E+05	2.1745E+04	8.9358E+03	3.8977E+03	2.5349E-01
-			-			-		
2.1995E+02	1.3628E+03	1.1114E+01	9.1300E+04	1.0157E+05	2.8495E+04	8.9358E+03	2.4361E+03	8.5826E-01
-			-			-		
2.1995E+02	1.2979E+03	2.4441E+01	9.1300E+04	9.4800E+04	5.5870E+04	8.9358E+03	1.9489E+03	2.9448E-01
-			-			-		
2.1995E+02	1.2330E+03	1.7802E+01	9.1300E+04	8.8029E+04	7.8672E+04	8.9358E+03	1.4617E+03	1.2397E+00
-			-			-		
2.1995E+02	1.1681E+03	6.6062E+00	9.1300E+04	8.1257E+04	1.6353E+05	8.9358E+03	9.7443E+02	9.4784E+00
-			-			-		
2.1995E+02	1.1032E+03	6.5858E+00	9.1300E+04	7.4486E+04	2.3832E+05	8.9358E+03	4.8722E+02	1.5359E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-			-		
2.1995E+02	1.0383E+03	1.1114E+01	9.1300E+04	6.7714E+04	3.5430E+05	8.9358E+03	0.0000E+00	2.2538E+02
-			-			-		
2.1995E+02	9.7345E+02	2.3373E+01	9.1300E+04	6.0943E+04	5.3659E+05	9.5064E+03	1.4617E+03	1.0625E-01
-			-			-		
2.1995E+02	9.0855E+02	2.0003E+01	9.1300E+04	5.4171E+04	6.5276E+05	9.5064E+03	9.7443E+02	1.4724E-01
-			-			-		
2.1995E+02	8.4365E+02	1.4508E+01	9.1300E+04	4.7400E+04	1.0979E+06	9.5064E+03	4.8722E+02	1.2730E+01
-			-			-		
2.1995E+02	7.7876E+02	2.6978E+01	9.1300E+04	4.0629E+04	1.4748E+06	9.5064E+03	0.0000E+00	4.3071E+01
-			-			-		
2.1995E+02	7.1386E+02	3.1621E+01	9.1300E+04	3.3857E+04	1.9013E+06	1.0077E+04	2.4361E+03	1.0625E-01
-			-			-		
2.1995E+02	6.4896E+02	3.5443E+01	9.1300E+04	2.7086E+04	2.4954E+06	1.0077E+04	4.8722E+02	2.1250E-01
-			-			-		
2.1995E+02	5.8407E+02	4.6215E+01	9.1300E+04	2.0314E+04	3.1341E+06	1.0077E+04	0.0000E+00	7.7604E-01
-			-			-		
2.1995E+02	5.1917E+02	2.6149E+01	9.1300E+04	1.3543E+04	3.2452E+06	1.0648E+04	9.7443E+02	1.0625E-01
-			-			-		
2.1995E+02	4.5427E+02	4.2617E+01	9.1300E+04	6.7714E+03	3.6385E+06	1.0648E+04	0.0000E+00	1.0337E+01
-			-			-		
2.1995E+02	3.8938E+02	1.0670E+02	9.1300E+04	0.0000E+00	1.1463E+07	1.1218E+04	0.0000E+00	2.1250E-01
-			-			-		
2.1995E+02	3.2448E+02	8.1833E+01	9.9262E+04	1.9637E+05	5.2170E+01	1.1789E+04	4.8722E+02	1.0625E-01
-			-					
2.1995E+02	2.5959E+02	9.7894E+01	9.9262E+04	1.8960E+05	4.7773E+00			
-			-					
2.1995E+02	1.9469E+02	1.0512E+04	9.9262E+04	1.7606E+05	4.0292E+01			
-			-					
2.1995E+02	1.2979E+02	2.8725E+02	9.9262E+04	1.6929E+05	4.2474E+02			
-			-					
2.1995E+02	6.4896E+01	4.2241E+04	9.9262E+04	1.6251E+05	3.2041E+02			
-			-					
2.1995E+02	0.0000E+00	2.5695E+05	9.9262E+04	1.5574E+05	4.0792E+02			
-			-					
2.9137E+02	2.2065E+03	6.2500E-01	9.9262E+04	1.4897E+05	4.1837E+03			
-			-					
2.9137E+02	1.4926E+03	1.7500E+00	9.9262E+04	1.4220E+05	3.2449E+03			
-			-					
2.9137E+02	1.4277E+03	3.0859E+00	9.9262E+04	1.3543E+05	8.0275E+03			
-			-					
2.9137E+02	1.3628E+03	4.4217E+00	9.9262E+04	1.2866E+05	5.8191E+03			
-			-					
2.9137E+02	1.2979E+03	3.0859E+00	9.9262E+04	1.2189E+05	1.7122E+04			
-			-					
2.9137E+02	1.2330E+03	1.8563E+00	9.9262E+04	1.1511E+05	1.7046E+04			
-			-					
2.9137E+02	1.1681E+03	3.6063E+00	9.9262E+04	1.0834E+05	2.7595E+04			
-			-					
2.9137E+02	1.1032E+03	8.4421E+00	9.9262E+04	1.0157E+05	5.6442E+04			
-			-					
2.9137E+02	1.0383E+03	6.1717E+00	9.9262E+04	9.4800E+04	9.5041E+04			
-			-					
2.9137E+02	9.7345E+02	4.4217E+00	9.9262E+04	8.8029E+04	1.6014E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.9137E+02	9.0855E+02	1.0500E+01	9.9262E+04	8.1257E+04	1.9549E+05			
-			-					
2.9137E+02	8.4365E+02	1.1750E+01	9.9262E+04	7.4486E+04	3.0290E+05			
-			-					
2.9137E+02	7.7876E+02	1.8240E+01	9.9262E+04	6.7714E+04	5.2685E+05			
-			-					
2.9137E+02	7.1386E+02	1.5843E+01	9.9262E+04	6.0943E+04	8.0326E+05			
-			-					
2.9137E+02	6.4896E+02	7.1062E+00	9.9262E+04	5.4171E+04	1.2381E+06			
-			-					
2.9137E+02	5.8407E+02	1.8750E+01	9.9262E+04	4.7400E+04	1.6612E+06			
-			-					
2.9137E+02	5.1917E+02	4.0260E+01	9.9262E+04	4.0629E+04	2.4235E+06			
-			-					
2.9137E+02	4.5427E+02	2.0465E+01	9.9262E+04	3.3857E+04	3.2462E+06			
-			-					
2.9137E+02	3.8938E+02	3.2621E+01	9.9262E+04	2.7086E+04	3.8908E+06			
-			-					
2.9137E+02	3.2448E+02	7.2323E+01	9.9262E+04	2.0314E+04	4.0552E+06			
-			-					
2.9137E+02	2.5959E+02	3.8470E+01	9.9262E+04	1.3543E+04	3.7622E+06			
-			-					
2.9137E+02	1.9469E+02	5.3698E+01	9.9262E+04	6.7714E+03	3.9711E+06			
-			-					
2.9137E+02	1.2979E+02	9.9325E+01	9.9262E+04	0.0000E+00	1.0911E+07			
-			-					
2.9137E+02	6.4896E+01	3.3975E+02	1.0722E+05	1.8960E+05	1.5125E+02			
-			-					
2.9137E+02	0.0000E+00	9.4900E+04	1.0722E+05	1.6929E+05	1.7168E+02			
-			-					
3.6279E+02	2.0118E+03	1.3359E+00	1.0722E+05	1.6251E+05	4.0629E+02			
-			-					
3.6279E+02	1.6873E+03	1.3359E+00	1.0722E+05	1.5574E+05	9.1900E+02			
-			-					
3.6279E+02	1.5575E+03	1.3359E+00	1.0722E+05	1.4897E+05	3.0198E+03			
-			-					
3.6279E+02	1.4277E+03	2.6717E+00	1.0722E+05	1.4220E+05	8.1933E+03			
-			-					
3.6279E+02	1.2979E+03	6.5858E+00	1.0722E+05	1.3543E+05	1.3498E+04			
-			-					
3.6279E+02	1.2330E+03	4.4217E+00	1.0722E+05	1.2866E+05	1.1785E+04			
-			-					
3.6279E+02	1.1681E+03	3.5000E+00	1.0722E+05	1.2189E+05	2.2087E+04			
-			-					
3.6279E+02	1.1032E+03	2.6717E+00	1.0722E+05	1.1511E+05	2.2381E+04			
-			-					
3.6279E+02	1.0383E+03	1.0625E-01	1.0722E+05	1.0834E+05	6.4211E+04			
-			-					
3.6279E+02	9.7345E+02	1.2500E+00	1.0722E+05	1.0157E+05	6.0050E+04			
-			-					
3.6279E+02	9.0855E+02	3.5000E+00	1.0722E+05	9.4800E+04	9.3064E+04			
-			-					
3.6279E+02	8.4365E+02	6.1717E+00	1.0722E+05	8.8029E+04	1.9517E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.6279E+02	7.7876E+02	1.2500E+00	1.0722E+05	8.1257E+04	2.8076E+05			
-			-					
3.6279E+02	7.1386E+02	9.7779E+00	1.0722E+05	7.4486E+04	4.1733E+05			
-			-					
3.6279E+02	6.4896E+02	2.2015E+01	1.0722E+05	6.7714E+04	6.2888E+05			
-			-					
3.6279E+02	5.8407E+02	1.0500E+01	1.0722E+05	6.0943E+04	1.0120E+06			
-			-					
3.6279E+02	5.1917E+02	2.2672E+01	1.0722E+05	5.4171E+04	1.5402E+06			
-			-					
3.6279E+02	4.5427E+02	1.2343E+01	1.0722E+05	4.7400E+04	2.1605E+06			
-			-					
3.6279E+02	3.8938E+02	1.7687E+01	1.0722E+05	4.0629E+04	3.1984E+06			
-			-					
3.6279E+02	3.2448E+02	2.1608E+01	1.0722E+05	3.3857E+04	4.0219E+06			
-			-					
3.6279E+02	2.5959E+02	2.2973E+01	1.0722E+05	2.7086E+04	4.9991E+06			
-			-					
3.6279E+02	1.9469E+02	2.3605E+01	1.0722E+05	2.0314E+04	5.0528E+06			
-			-					
3.6279E+02	1.2979E+02	6.7865E+01	1.0722E+05	1.3543E+04	4.4418E+06			
-			-					
3.6279E+02	6.4896E+01	1.7946E+02	1.0722E+05	6.7714E+03	4.2378E+06			
-			-					
3.6279E+02	0.0000E+00	4.1858E+04	1.0722E+05	0.0000E+00	1.1793E+07			
-			-					
4.3421E+02	1.7522E+03	1.3359E+00	1.1519E+05	1.8960E+05	2.7993E+01			
-			-					
4.3421E+02	1.4277E+03	2.6717E+00	1.1519E+05	1.8283E+05	1.0721E+02			
-			-					
4.3421E+02	1.3628E+03	1.7500E+00	1.1519E+05	1.7606E+05	2.7993E+01			
-			-					
4.3421E+02	1.2330E+03	3.5000E+00	1.1519E+05	1.6929E+05	9.1387E+02			
-			-					
4.3421E+02	1.0383E+03	3.5000E+00	1.1519E+05	1.6251E+05	8.3841E+02			
-			-					
4.3421E+02	9.0855E+02	1.2500E+00	1.1519E+05	1.5574E+05	3.4697E+03			
-			-					
4.3421E+02	8.4365E+02	1.7417E+01	1.1519E+05	1.4897E+05	2.2419E+03			
-			-					
4.3421E+02	7.7876E+02	6.2779E+00	1.1519E+05	1.4220E+05	5.6073E+03			
-			-					
4.3421E+02	7.1386E+02	2.7780E+00	1.1519E+05	1.3543E+05	1.0987E+04			
-			-					
4.3421E+02	6.4896E+02	3.5000E+00	1.1519E+05	1.2866E+05	2.2603E+04			
-			-					
4.3421E+02	5.8407E+02	6.1717E+00	1.1519E+05	1.2189E+05	2.2513E+04			
-			-					
4.3421E+02	5.1917E+02	1.7500E+01	1.1519E+05	1.1511E+05	4.8116E+04			
-			-					
4.3421E+02	4.5427E+02	1.6965E+01	1.1519E+05	1.0834E+05	4.0489E+04			
-			-					
4.3421E+02	3.8938E+02	2.1843E+01	1.1519E+05	1.0157E+05	7.7578E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
4.3421E+02	3.2448E+02	1.7687E+01	1.1519E+05	9.4800E+04	1.5050E+05			
-			-					
4.3421E+02	2.5959E+02	4.3036E+01	1.1519E+05	8.8029E+04	1.9071E+05			
-			-					
4.3421E+02	1.9469E+02	3.0965E+01	1.1519E+05	8.1257E+04	3.1986E+05			
-			-					
4.3421E+02	1.2979E+02	4.1970E+01	1.1519E+05	7.4486E+04	4.5906E+05			
-			-					
4.3421E+02	6.4896E+01	7.3807E+01	1.1519E+05	6.7714E+04	7.2382E+05			
-			-					
4.3421E+02	0.0000E+00	1.0542E+04	1.1519E+05	6.0943E+04	1.0800E+06			
-			-					
5.0563E+02	1.6873E+03	3.0000E+00	1.1519E+05	5.4171E+04	1.5616E+06			
-			-					
5.0563E+02	9.0855E+02	6.1717E+00	1.1519E+05	4.7400E+04	2.9280E+06			
-			-					
5.0563E+02	7.7876E+02	3.5000E+00	1.1519E+05	4.0629E+04	3.4562E+06			
-			-					
5.0563E+02	7.1386E+02	5.3434E+00	1.1519E+05	3.3857E+04	5.0074E+06			
-			-					
5.0563E+02	6.4896E+02	1.3089E+01	1.1519E+05	2.7086E+04	5.6820E+06			
-			-					
5.0563E+02	5.8407E+02	7.0000E+00	1.1519E+05	2.0314E+04	5.9274E+06			
-			-					
5.0563E+02	5.1917E+02	3.9217E+00	1.1519E+05	1.3543E+04	5.2356E+06			
-			-					
5.0563E+02	4.5427E+02	1.7417E+01	1.1519E+05	6.7714E+03	4.7653E+06			
-			-					
5.0563E+02	3.8938E+02	5.3434E+00	1.1519E+05	0.0000E+00	1.3698E+07			
-			-					
5.0563E+02	3.2448E+02	1.4422E+01	1.2315E+05	1.8283E+05	2.7993E+01			
-			-					
5.0563E+02	2.5959E+02	1.6589E+01	1.2315E+05	1.6929E+05	2.7993E+01			
-			-					
5.0563E+02	1.9469E+02	2.0089E+01	1.2315E+05	1.6251E+05	2.7993E+01			
-			-					
5.0563E+02	1.2979E+02	4.7147E+01	1.2315E+05	1.5574E+05	5.3029E+02			
-			-					
5.0563E+02	6.4896E+01	1.0306E+02	1.2315E+05	1.4897E+05	2.4140E+03			
-			-					
5.0563E+02	0.0000E+00	1.1027E+02	1.2315E+05	1.4220E+05	1.7938E+03			
-			-					
5.7705E+02	9.0855E+02	3.5000E+00	1.2315E+05	1.3543E+05	8.1716E+03			
-			-					
5.7705E+02	8.4365E+02	3.5000E+00	1.2315E+05	1.2866E+05	1.6179E+04			
-			-					
5.7705E+02	7.7876E+02	3.5000E+00	1.2315E+05	1.2189E+05	1.4428E+04			
-			-					
5.7705E+02	4.5427E+02	2.6717E+00	1.2315E+05	1.1511E+05	5.8493E+04			
-			-					
5.7705E+02	3.8938E+02	8.0151E+00	1.2315E+05	1.0834E+05	7.5238E+04			
-			-					
5.7705E+02	3.2448E+02	2.8842E+00	1.2315E+05	1.0157E+05	1.3242E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
5.7705E+02	2.5959E+02	8.1214E+00	1.2315E+05	9.4800E+04	1.3485E+05			
-			-					
5.7705E+02	1.2979E+02	2.9882E+01	1.2315E+05	8.8029E+04	2.6389E+05			
-			-					
5.7705E+02	6.4896E+01	8.2357E+01	1.2315E+05	8.1257E+04	3.1140E+05			
-			-					
5.7705E+02	0.0000E+00	8.0322E+01	1.2315E+05	7.4486E+04	6.4841E+05			
-			-					
6.4847E+02	5.1917E+02	2.6717E+00	1.2315E+05	6.7714E+04	9.8868E+05			
-			-					
6.4847E+02	4.5427E+02	5.3434E+00	1.2315E+05	6.0943E+04	1.4103E+06			
-			-					
6.4847E+02	3.8938E+02	2.6717E+00	1.2315E+05	5.4171E+04	2.3533E+06			
-			-					
6.4847E+02	3.2448E+02	2.6717E+00	1.2315E+05	4.7400E+04	3.2686E+06			
-			-					
6.4847E+02	2.5959E+02	5.3434E+00	1.2315E+05	4.0629E+04	4.5388E+06			
-			-					
6.4847E+02	1.9469E+02	1.0793E+01	1.2315E+05	3.3857E+04	6.1629E+06			
-			-					
6.4847E+02	1.2979E+02	3.1152E+01	1.2315E+05	2.7086E+04	6.8297E+06			
-			-					
6.4847E+02	6.4896E+01	3.9725E+01	1.2315E+05	2.0314E+04	6.9758E+06			
-			-					
6.4847E+02	0.0000E+00	5.1470E+01	1.2315E+05	1.3543E+04	5.6936E+06			
-			-					
7.1988E+02	3.8938E+02	2.6717E+00	1.2315E+05	6.7714E+03	5.0640E+06			
-			-					
7.1988E+02	3.2448E+02	2.6717E+00	1.2315E+05	0.0000E+00	1.5558E+07			
-			-					
7.1988E+02	2.5959E+02	5.3434E+00	1.3111E+05	1.5574E+05	1.5125E+02			
-			-					
7.1988E+02	1.9469E+02	8.0151E+00	1.3111E+05	1.4897E+05	2.7993E+01			
-			-					
7.1988E+02	1.2979E+02	1.5843E+01	1.3111E+05	1.4220E+05	2.0311E+03			
-			-					
7.1988E+02	6.4896E+01	1.6965E+01	1.3111E+05	1.3543E+05	5.0840E+02			
-			-					
7.1988E+02	0.0000E+00	4.6877E+01	1.3111E+05	1.2866E+05	7.1185E+03			
-			-					
7.9130E+02	2.5959E+02	2.7780E+00	1.3111E+05	1.2189E+05	1.3601E+04			
-			-					
7.9130E+02	1.9469E+02	5.3434E+00	1.3111E+05	1.1511E+05	1.9924E+04			
-			-					
7.9130E+02	1.2979E+02	8.8434E+00	1.3111E+05	1.0834E+05	2.9640E+04			
-			-					
7.9130E+02	6.4896E+01	8.0151E+00	1.3111E+05	1.0157E+05	8.1353E+04			
-			-					
7.9130E+02	0.0000E+00	9.7779E+00	1.3111E+05	9.4800E+04	1.2781E+05			
-			-					
8.6272E+02	5.1917E+02	2.6717E+00	1.3111E+05	8.8029E+04	2.1432E+05			
-			-					
8.6272E+02	1.2979E+02	2.6717E+00	1.3111E+05	8.1257E+04	4.5349E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
- 8.6272E+02	6.4896E+01	8.0151E+00	- 1.3111E+05	7.4486E+04	6.7796E+05			
- 8.6272E+02	0.0000E+00	1.0417E+01	- 1.3111E+05	6.7714E+04	1.1694E+06			
- 9.3414E+02	1.2979E+02	2.6717E+00	- 1.3111E+05	6.0943E+04	1.7001E+06			
- 9.3414E+02	6.4896E+01	2.6717E+00	- 1.3111E+05	5.4171E+04	3.0189E+06			
- 9.3414E+02	0.0000E+00	6.1717E+00	- 1.3111E+05	4.7400E+04	4.0745E+06			
- 1.2198E+03	0.0000E+00	2.6717E+00	- 1.3111E+05	4.0629E+04	5.7137E+06			
			- 1.3111E+05	3.3857E+04	7.2321E+06			
			- 1.3111E+05	2.7086E+04	8.4628E+06			
			- 1.3111E+05	2.0314E+04	8.1190E+06			
			- 1.3111E+05	1.3543E+04	6.9053E+06			
			- 1.3111E+05	6.7714E+03	6.1818E+06			
			- 1.3111E+05	0.0000E+00	1.7010E+07			
			- 1.3907E+05	1.5574E+05	7.9220E+01			
			- 1.3907E+05	1.4897E+05	2.7993E+01			
			- 1.3907E+05	1.4220E+05	1.5844E+02			
			- 1.3907E+05	1.3543E+05	2.9625E+03			
			- 1.3907E+05	1.2866E+05	1.2500E+03			
			- 1.3907E+05	1.2189E+05	1.3332E+03			
			- 1.3907E+05	1.1511E+05	5.7294E+03			
			- 1.3907E+05	1.0834E+05	2.7097E+04			
			- 1.3907E+05	1.0157E+05	2.4736E+04			
			- 1.3907E+05	9.4800E+04	4.6242E+04			
			- 1.3907E+05	8.8029E+04	9.5649E+04			
			- 1.3907E+05	8.1257E+04	1.7363E+05			
			- 1.3907E+05	7.4486E+04	2.5148E+05			
			- 1.3907E+05	6.7714E+04	5.5821E+05			
			- 1.3907E+05	6.0943E+04	9.1437E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			- 1.3907E+05	5.4171E+04	1.4345E+06			
			- 1.3907E+05	4.7400E+04	2.5012E+06			
			- 1.3907E+05	4.0629E+04	3.8332E+06			
			- 1.3907E+05	3.3857E+04	4.8270E+06			
			- 1.3907E+05	2.7086E+04	6.3599E+06			
			- 1.3907E+05	2.0314E+04	6.1652E+06			
			- 1.3907E+05	1.3543E+04	5.1275E+06			
			- 1.3907E+05	6.7714E+03	5.0898E+06			
			- 1.3907E+05	0.0000E+00	1.4374E+07			
			- 1.4704E+05	1.4220E+05	7.9220E+01			
			- 1.4704E+05	1.2866E+05	1.1041E+03			
			- 1.4704E+05	1.2189E+05	9.4432E+02			
			- 1.4704E+05	1.1511E+05	2.1824E+03			
			- 1.4704E+05	1.0834E+05	1.3556E+03			
			- 1.4704E+05	1.0157E+05	1.0252E+04			
			- 1.4704E+05	9.4800E+04	8.5142E+03			
			- 1.4704E+05	8.8029E+04	9.0814E+03			
			- 1.4704E+05	8.1257E+04	3.4403E+04			
			- 1.4704E+05	7.4486E+04	4.2212E+04			
			- 1.4704E+05	6.7714E+04	1.5305E+05			
			- 1.4704E+05	6.0943E+04	2.2138E+05			
			- 1.4704E+05	5.4171E+04	5.8412E+05			
			- 1.4704E+05	4.7400E+04	8.3987E+05			
			- 1.4704E+05	4.0629E+04	1.3288E+06			
			- 1.4704E+05	3.3857E+04	1.9209E+06			
			- 1.4704E+05	2.7086E+04	2.5018E+06			
			- 1.4704E+05	2.0314E+04	2.6769E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			-					
			1.4704E+05	1.3543E+04	2.3157E+06			
			-					
			1.4704E+05	6.7714E+03	2.3547E+06			
			-					
			1.4704E+05	0.0000E+00	7.5492E+06			
			-					
			1.5500E+05	8.8029E+04	6.1793E+03			
			-					
			1.5500E+05	8.1257E+04	5.5986E+01			
			-					
			1.5500E+05	7.4486E+04	3.6104E+03			
			-					
			1.5500E+05	6.7714E+04	9.8791E+03			
			-					
			1.5500E+05	6.0943E+04	1.5612E+04			
			-					
			1.5500E+05	5.4171E+04	7.7922E+04			
			-					
			1.5500E+05	4.7400E+04	9.8093E+04			
			-					
			1.5500E+05	4.0629E+04	2.1273E+05			
			-					
			1.5500E+05	3.3857E+04	3.8328E+05			
			-					
			1.5500E+05	2.7086E+04	5.1268E+05			
			-					
			1.5500E+05	2.0314E+04	5.9810E+05			
			-					
			1.5500E+05	1.3543E+04	5.1288E+05			
			-					
			1.5500E+05	6.7714E+03	5.9117E+05			
			-					
			1.5500E+05	0.0000E+00	2.7930E+06			
			-					
			1.6296E+05	8.1257E+04	6.1137E+02			
			-					
			1.6296E+05	6.7714E+04	7.7966E+02			
			-					
			1.6296E+05	6.0943E+04	1.2264E+03			
			-					
			1.6296E+05	5.4171E+04	1.2294E+03			
			-					
			1.6296E+05	4.7400E+04	1.1517E+04			
			-					
			1.6296E+05	4.0629E+04	1.0974E+04			
			-					
			1.6296E+05	3.3857E+04	2.3887E+04			
			-					
			1.6296E+05	2.7086E+04	2.0008E+04			
			-					
			1.6296E+05	2.0314E+04	3.7079E+04			
			-					
			1.6296E+05	1.3543E+04	4.8384E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
			- 1.6296E+05	6.7714E+03	6.5760E+04			
			- 1.6296E+05	0.0000E+00	5.6968E+05			
			- 1.7092E+05	5.4171E+04	5.8658E+01			
			- 1.7092E+05	4.7400E+04	2.6717E+00			
			- 1.7092E+05	4.0629E+04	2.6717E+00			
			- 1.7092E+05	3.3857E+04	5.8658E+01			
			- 1.7092E+05	2.0314E+04	6.1939E+02			
			- 1.7092E+05	1.3543E+04	2.6717E+00			
			- 1.7092E+05	6.7714E+03	4.4598E+03			
			- 1.7092E+05	0.0000E+00	5.5235E+04			
			- 1.7889E+05	1.3543E+04	1.5392E+02			
			- 1.7889E+05	6.7714E+03	2.6717E+00			
			- 1.7889E+05	0.0000E+00	9.5459E+03			
			- 1.8685E+05	2.0314E+04	2.6717E+00			

Table 5-16 [6] Markov Matrix

Appendix I. Markov matrices – issued from [7]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [7]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.5270E+03	0.0000E+00	1.7358E+03	1.4737E+05	0.0000E+00	3.3392E+00	7.9795E+03	0.0000E+00	3.3392E+00
1.4647E+03	0.0000E+00	3.5382E+02	1.3980E+05	1.9566E+04	3.3392E+00	7.4293E+03	3.7178E+03	3.3392E+00
1.4025E+03	0.0000E+00	3.2558E+03	1.3223E+05	6.5219E+03	3.3392E+00	7.4293E+03	0.0000E+00	4.5892E+00
1.3403E+03	5.2597E+01	8.0085E+02	1.3223E+05	0.0000E+00	3.3392E+00	6.8792E+03	3.7178E+03	3.3392E+00
1.3403E+03	0.0000E+00	2.9878E+04	1.2466E+05	6.5219E+03	6.6784E+00	6.8792E+03	9.2946E+02	6.0878E+00
1.2780E+03	1.5779E+02	3.3392E+00	1.2466E+05	0.0000E+00	1.3357E+01	6.8792E+03	0.0000E+00	1.7463E+02
1.2780E+03	5.2597E+01	1.0281E+04	1.1708E+05	1.3044E+04	3.3392E+00	6.3290E+03	2.3236E+03	3.3392E+00
1.2780E+03	0.0000E+00	6.0143E+04	1.1708E+05	6.5219E+03	6.6784E+00	6.3290E+03	1.8589E+03	3.5000E+00
1.2158E+03	2.1039E+02	3.3392E+00	1.1708E+05	0.0000E+00	1.3518E+01	6.3290E+03	9.2946E+02	3.3392E+00
1.2158E+03	1.5779E+02	1.7724E+02	1.0951E+05	6.5219E+03	1.0178E+01	6.3290E+03	4.6473E+02	4.7500E+00
1.2158E+03	1.0519E+02	9.8832E+03	1.0951E+05	0.0000E+00	7.1329E+00	5.7789E+03	7.4356E+03	3.3392E+00
1.2158E+03	5.2597E+01	6.3175E+04	1.0194E+05	3.9131E+04	3.5000E+00	5.7789E+03	9.2946E+02	1.0654E+01
1.2158E+03	0.0000E+00	2.7933E+05	1.0194E+05	1.3044E+04	3.3392E+00	5.7789E+03	4.6473E+02	7.1058E+03
1.1535E+03	4.2078E+02	7.9480E+01	1.0194E+05	0.0000E+00	2.7035E+01	5.7789E+03	0.0000E+00	8.8465E+03
1.1535E+03	2.6299E+02	6.5105E+00	9.4372E+04	3.2609E+04	3.5000E+00	5.2288E+03	5.5767E+03	3.3392E+00
1.1535E+03	1.5779E+02	1.5169E+03	9.4372E+04	6.5219E+03	2.0357E+01	5.2288E+03	5.1120E+03	3.3392E+00
1.1535E+03	1.0519E+02	2.2663E+04	9.4372E+04	0.0000E+00	6.1686E+01	5.2288E+03	1.8589E+03	1.4001E+03
1.1535E+03	5.2597E+01	2.2109E+05	8.6801E+04	7.1741E+04	1.2500E+00	5.2288E+03	9.2946E+02	2.3072E+01
1.1535E+03	0.0000E+00	7.6003E+05	8.6801E+04	4.5653E+04	3.5000E+00	5.2288E+03	4.6473E+02	1.3218E+04
1.0913E+03	5.2597E+02	2.6055E+00	8.6801E+04	3.9131E+04	3.5000E+00	5.2288E+03	0.0000E+00	7.5239E+04
1.0913E+03	4.2078E+02	6.6784E+00	8.6801E+04	3.2609E+04	3.3392E+00	4.6786E+03	6.9709E+03	1.8279E+01
1.0913E+03	2.1039E+02	1.6961E+02	8.6801E+04	2.6088E+04	3.5000E+00	4.6786E+03	2.7884E+03	5.1116E+02
1.0913E+03	1.5779E+02	4.3157E+03	8.6801E+04	1.9566E+04	6.8392E+00	4.6786E+03	2.3236E+03	2.1441E+01
1.0913E+03	1.0519E+02	1.2166E+05	8.6801E+04	1.3044E+04	1.3839E+01	4.6786E+03	1.8589E+03	2.3100E+01
1.0913E+03	5.2597E+01	7.7137E+05	8.6801E+04	6.5219E+03	2.7357E+01	4.6786E+03	1.3942E+03	4.2269E+03
1.0913E+03	0.0000E+00	2.1877E+06	8.6801E+04	0.0000E+00	6.0868E+01	4.6786E+03	9.2946E+02	3.7249E+04
1.0291E+03	1.1571E+03	2.3875E+01	7.9230E+04	6.5219E+04	3.5000E+00	4.6786E+03	4.6473E+02	9.1657E+04
1.0291E+03	7.8896E+02	5.0892E+00	7.9230E+04	3.2609E+04	1.6521E+01	4.6786E+03	0.0000E+00	3.0160E+05
1.0291E+03	6.8376E+02	3.3392E+00	7.9230E+04	2.6088E+04	3.3392E+00	4.1285E+03	6.5062E+03	3.3392E+00
1.0291E+03	6.3116E+02	3.3392E+00	7.9230E+04	1.9566E+04	1.1750E+01	4.1285E+03	6.0415E+03	1.9974E+02
1.0291E+03	5.2597E+02	1.0018E+01	7.9230E+04	1.3044E+04	3.9560E+01	4.1285E+03	4.1825E+03	4.2460E+00
1.0291E+03	4.7337E+02	1.2288E+03	7.9230E+04	6.5219E+03	3.4811E+01	4.1285E+03	3.7178E+03	1.2766E+01
1.0291E+03	4.2078E+02	1.2988E+03	7.9230E+04	0.0000E+00	8.0728E+01	4.1285E+03	3.2531E+03	8.8120E+03
1.0291E+03	3.6818E+02	1.5107E+01	7.1659E+04	2.0218E+05	1.6696E+00	4.1285E+03	2.7884E+03	2.9120E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0291E+03	3.1558E+02	9.7112E+01	7.1659E+04	9.1306E+04	3.3392E+00	4.1285E+03	2.3236E+03	1.4833E+04
1.0291E+03	2.6299E+02	2.7407E+02	7.1659E+04	3.9131E+04	3.5000E+00	4.1285E+03	1.8589E+03	3.7397E+04
1.0291E+03	2.1039E+02	2.2833E+04	7.1659E+04	3.2609E+04	7.0000E+00	4.1285E+03	1.3942E+03	4.0956E+04
1.0291E+03	1.5779E+02	4.6292E+04	7.1659E+04	2.6088E+04	3.6329E+00	4.1285E+03	9.2946E+02	1.1591E+05
1.0291E+03	1.0519E+02	3.9432E+05	7.1659E+04	1.9566E+04	3.5000E+00	4.1285E+03	4.6473E+02	4.0704E+05
1.0291E+03	5.2597E+01	2.1536E+06	7.1659E+04	1.3044E+04	6.8392E+00	4.1285E+03	0.0000E+00	1.1566E+06
1.0291E+03	0.0000E+00	5.4408E+06	7.1659E+04	6.5219E+03	2.1000E+01	3.5783E+03	1.4871E+04	1.6696E+00
9.6682E+02	1.5779E+03	8.6790E+02	7.1659E+04	0.0000E+00	8.9102E+01	3.5783E+03	6.9709E+03	4.2460E+00
9.6682E+02	1.3675E+03	5.6918E+02	6.4088E+04	1.7609E+05	1.6696E+00	3.5783E+03	6.5062E+03	3.8637E+03
9.6682E+02	1.1571E+03	4.7750E+01	6.4088E+04	1.6957E+05	1.6696E+00	3.5783E+03	6.0415E+03	1.3292E-01
9.6682E+02	1.1045E+03	4.7750E+01	6.4088E+04	5.2175E+04	6.8392E+00	3.5783E+03	5.5767E+03	3.7380E+00
9.6682E+02	9.9934E+02	2.9646E+03	6.4088E+04	3.2609E+04	3.5000E+00	3.5783E+03	5.1120E+03	9.9580E+03
9.6682E+02	9.4675E+02	2.5975E+03	6.4088E+04	2.6088E+04	7.1329E+00	3.5783E+03	4.6473E+03	1.3278E+04
9.6682E+02	8.9415E+02	3.4069E+03	6.4088E+04	1.9566E+04	8.0892E+00	3.5783E+03	4.1825E+03	2.8378E+04
9.6682E+02	8.4155E+02	1.0958E+04	6.4088E+04	1.3044E+04	1.1883E+01	3.5783E+03	3.7178E+03	3.3536E+04
9.6682E+02	7.8896E+02	3.1572E+03	6.4088E+04	6.5219E+03	3.6696E+01	3.5783E+03	3.2531E+03	1.3580E+05
9.6682E+02	7.3636E+02	2.1317E+04	6.4088E+04	0.0000E+00	3.8638E+01	3.5783E+03	2.7884E+03	2.3667E+05
9.6682E+02	6.8376E+02	2.1289E+04	5.6517E+04	1.6957E+05	1.6696E+00	3.5783E+03	2.3236E+03	2.6329E+05
9.6682E+02	6.3116E+02	5.0075E+04	5.6517E+04	1.6305E+05	1.6696E+00	3.5783E+03	1.8589E+03	4.0075E+05
9.6682E+02	5.7857E+02	5.8097E+04	5.6517E+04	1.5000E+05	1.6696E+00	3.5783E+03	1.3942E+03	2.6570E+05
9.6682E+02	5.2597E+02	6.3232E+04	5.6517E+04	1.4348E+05	3.3392E+00	3.5783E+03	9.2946E+02	3.9905E+05
9.6682E+02	4.7337E+02	4.4232E+04	5.6517E+04	7.1741E+04	3.3392E+00	3.5783E+03	4.6473E+02	1.2202E+06
9.6682E+02	4.2078E+02	6.5520E+04	5.6517E+04	5.8697E+04	1.3292E-01	3.5783E+03	0.0000E+00	2.9357E+06
9.6682E+02	3.6818E+02	1.3488E+05	5.6517E+04	4.5653E+04	3.5000E+00	3.0282E+03	1.3942E+04	6.2500E-01
9.6682E+02	3.1558E+02	1.1747E+05	5.6517E+04	3.2609E+04	1.5158E+00	3.0282E+03	1.3477E+04	6.2500E-01
9.6682E+02	2.6299E+02	7.8675E+04	5.6517E+04	2.6088E+04	1.8533E+01	3.0282E+03	1.0224E+04	1.6696E+00
9.6682E+02	2.1039E+02	1.5247E+05	5.6517E+04	1.9566E+04	8.3829E+00	3.0282E+03	7.9004E+03	3.3392E+00
9.6682E+02	1.5779E+02	4.3907E+05	5.6517E+04	1.3044E+04	3.6360E+01	3.0282E+03	7.4356E+03	5.4722E+03
9.6682E+02	1.0519E+02	1.3855E+06	5.6517E+04	6.5219E+03	3.9401E+01	3.0282E+03	6.9709E+03	3.7073E+02
9.6682E+02	5.2597E+01	5.8672E+06	5.6517E+04	0.0000E+00	9.3287E+01	3.0282E+03	6.5062E+03	5.4255E+02
9.6682E+02	0.0000E+00	9.7421E+06	4.8947E+04	1.5653E+05	3.3392E+00	3.0282E+03	6.0415E+03	6.4170E+03
9.0458E+02	1.7883E+03	1.5896E+02	4.8947E+04	1.5000E+05	5.0892E+00	3.0282E+03	5.5767E+03	2.5879E+04
9.0458E+02	1.6305E+03	1.1784E+03	4.8947E+04	1.4348E+05	5.0088E+00	3.0282E+03	5.1120E+03	6.3629E+04
9.0458E+02	1.5779E+03	5.4075E+01	4.8947E+04	1.3696E+05	3.5000E+00	3.0282E+03	4.6473E+03	1.3255E+05
9.0458E+02	1.5253E+03	1.5259E+03	4.8947E+04	1.2392E+05	1.7500E+00	3.0282E+03	4.1825E+03	2.1806E+05
9.0458E+02	1.4727E+03	1.7538E+03	4.8947E+04	1.1739E+05	3.5000E+00	3.0282E+03	3.7178E+03	3.8152E+05
9.0458E+02	1.4201E+03	2.6442E+03	4.8947E+04	1.0435E+05	3.3392E+00	3.0282E+03	3.2531E+03	3.8581E+05
9.0458E+02	1.3675E+03	1.8115E+03	4.8947E+04	9.1306E+04	3.3392E+00	3.0282E+03	2.7884E+03	6.291E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.0458E+02	1.3149E+03	5.2776E+03	4.8947E+04	8.4784E+04	3.3392E+00	3.0282E+03	2.3236E+03	6.3064E+05
9.0458E+02	1.2623E+03	5.7862E+03	4.8947E+04	6.5219E+04	1.0018E+01	3.0282E+03	1.8589E+03	5.4991E+05
9.0458E+02	1.2097E+03	6.4028E+03	4.8947E+04	5.2175E+04	1.2500E+00	3.0282E+03	1.3942E+03	6.4708E+05
9.0458E+02	1.1571E+03	1.4301E+04	4.8947E+04	4.5653E+04	4.8829E+00	3.0282E+03	9.2946E+02	8.7458E+05
9.0458E+02	1.1045E+03	1.1808E+04	4.8947E+04	3.9131E+04	1.0766E+01	3.0282E+03	4.6473E+02	2.6012E+06
9.0458E+02	1.0519E+03	3.1655E+04	4.8947E+04	3.2609E+04	2.0518E+01	3.0282E+03	0.0000E+00	4.6489E+06
9.0458E+02	9.9934E+02	3.5094E+04	4.8947E+04	2.6088E+04	1.0472E+01	2.4781E+03	1.1153E+04	1.6696E+00
9.0458E+02	9.4675E+02	4.2274E+04	4.8947E+04	1.9566E+04	4.0435E+01	2.4781E+03	1.0689E+04	3.5000E+00
9.0458E+02	8.9415E+02	4.8934E+04	4.8947E+04	1.3044E+04	4.8651E+01	2.4781E+03	1.0224E+04	1.8025E+00
9.0458E+02	8.4155E+02	1.0602E+05	4.8947E+04	6.5219E+03	5.4035E+01	2.4781E+03	9.7593E+03	1.7500E+00
9.0458E+02	7.8896E+02	1.7993E+05	4.8947E+04	0.0000E+00	1.3031E+02	2.4781E+03	8.8298E+03	1.3292E-01
9.0458E+02	7.3636E+02	3.2068E+05	4.1376E+04	1.5653E+05	5.2500E+00	2.4781E+03	8.3651E+03	1.6696E+00
9.0458E+02	6.8376E+02	4.4934E+05	4.1376E+04	1.5000E+05	1.7500E+00	2.4781E+03	7.9004E+03	1.8566E+02
9.0458E+02	6.3116E+02	5.2500E+05	4.1376E+04	1.4348E+05	1.0420E+01	2.4781E+03	7.4356E+03	1.5872E+03
9.0458E+02	5.7857E+02	6.5296E+05	4.1376E+04	1.3696E+05	1.0259E+01	2.4781E+03	6.9709E+03	2.0162E+04
9.0458E+02	5.2597E+02	9.5941E+05	4.1376E+04	1.3044E+05	3.5000E+00	2.4781E+03	6.5062E+03	2.5765E+04
9.0458E+02	4.7337E+02	1.1729E+06	4.1376E+04	1.2392E+05	6.8392E+00	2.4781E+03	6.0415E+03	1.0499E+05
9.0458E+02	4.2078E+02	1.3068E+06	4.1376E+04	1.1739E+05	1.7500E+00	2.4781E+03	5.5767E+03	1.7966E+05
9.0458E+02	3.6818E+02	1.3638E+06	4.1376E+04	1.1087E+05	1.7500E+00	2.4781E+03	5.1120E+03	2.6692E+05
9.0458E+02	3.1558E+02	1.3758E+06	4.1376E+04	1.0435E+05	3.3392E+00	2.4781E+03	4.6473E+03	3.6829E+05
9.0458E+02	2.6299E+02	1.3994E+06	4.1376E+04	7.8263E+04	1.3292E-01	2.4781E+03	4.1825E+03	6.1844E+05
9.0458E+02	2.1039E+02	1.3124E+06	4.1376E+04	6.5219E+04	1.0500E+01	2.4781E+03	3.7178E+03	7.5543E+05
9.0458E+02	1.5779E+02	1.9016E+06	4.1376E+04	5.8697E+04	1.0339E+01	2.4781E+03	3.2531E+03	9.7431E+05
9.0458E+02	1.0519E+02	3.8709E+06	4.1376E+04	5.2175E+04	6.8392E+00	2.4781E+03	2.7884E+03	9.6017E+05
9.0458E+02	5.2597E+01	1.1155E+07	4.1376E+04	4.5653E+04	2.8171E+01	2.4781E+03	2.3236E+03	1.1255E+06
9.0458E+02	0.0000E+00	1.7547E+07	4.1376E+04	3.9131E+04	1.5222E+01	2.4781E+03	1.8589E+03	1.1435E+06
8.4234E+02	1.9987E+03	2.3875E+01	4.1376E+04	3.2609E+04	3.2561E+01	2.4781E+03	1.3942E+03	1.3866E+06
8.4234E+02	1.8935E+03	1.8284E+02	4.1376E+04	2.6088E+04	5.1374E+01	2.4781E+03	9.2946E+02	2.0472E+06
8.4234E+02	1.8409E+03	2.9252E+02	4.1376E+04	1.9566E+04	7.2218E+01	2.4781E+03	4.6473E+02	4.4897E+06
8.4234E+02	1.7883E+03	1.5896E+02	4.1376E+04	1.3044E+04	7.7224E+01	2.4781E+03	0.0000E+00	9.4115E+06
8.4234E+02	1.7357E+03	1.7706E+03	4.1376E+04	6.5219E+03	1.3361E+02	1.9279E+03	1.8124E+04	1.6696E+00
8.4234E+02	1.6831E+03	1.2081E+03	4.1376E+04	0.0000E+00	2.9720E+04	1.9279E+03	1.1153E+04	1.7500E+00
8.4234E+02	1.6305E+03	3.1643E+03	3.3805E+04	1.9566E+05	1.6696E+00	1.9279E+03	1.0689E+04	2.5215E+02
8.4234E+02	1.5779E+03	2.9486E+03	3.3805E+04	1.8261E+05	6.2500E-01	1.9279E+03	9.7593E+03	2.8805E+03
8.4234E+02	1.5253E+03	4.2916E+03	3.3805E+04	1.6957E+05	1.7500E+00	1.9279E+03	9.2946E+03	2.5761E+02
8.4234E+02	1.4727E+03	4.0907E+03	3.3805E+04	1.6305E+05	1.6696E+00	1.9279E+03	8.8298E+03	4.3052E+03
8.4234E+02	1.4201E+03	1.7643E+04	3.3805E+04	1.5000E+05	5.0892E+00	1.9279E+03	8.3651E+03	1.6696E+00
8.4234E+02	1.3675E+03	2.4045E+04	3.3805E+04	1.4348E+05	1.7500E+00	1.9279E+03	7.9004E+03	2.5215E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.4234E+02	1.3149E+03	2.4952E+04	3.3805E+04	1.3696E+05	8.5892E+00	1.9279E+03	7.4356E+03	5.2705E+04
8.4234E+02	1.2623E+03	2.1927E+04	3.3805E+04	1.3044E+05	1.5589E+01	1.9279E+03	6.9709E+03	1.0872E+05
8.4234E+02	1.2097E+03	3.3373E+04	3.3805E+04	1.2392E+05	7.4642E+00	1.9279E+03	6.5062E+03	1.0783E+05
8.4234E+02	1.1571E+03	1.0552E+05	3.3805E+04	1.1739E+05	1.7500E+00	1.9279E+03	6.0415E+03	1.9615E+05
8.4234E+02	1.1045E+03	1.4397E+05	3.3805E+04	1.1087E+05	1.7500E+00	1.9279E+03	5.5767E+03	3.3795E+05
8.4234E+02	1.0519E+03	1.4380E+05	3.3805E+04	1.0435E+05	5.0892E+00	1.9279E+03	5.1120E+03	4.4720E+05
8.4234E+02	9.9934E+02	2.7212E+05	3.3805E+04	9.1306E+04	1.2250E+01	1.9279E+03	4.6473E+03	6.9795E+05
8.4234E+02	9.4675E+02	3.9119E+05	3.3805E+04	8.4784E+04	3.3392E+00	1.9279E+03	4.1825E+03	8.3871E+05
8.4234E+02	8.9415E+02	5.5346E+05	3.3805E+04	7.1741E+04	3.5000E+00	1.9279E+03	3.7178E+03	1.3065E+06
8.4234E+02	8.4155E+02	7.3465E+05	3.3805E+04	6.5219E+04	1.3839E+01	1.9279E+03	3.2531E+03	1.6936E+06
8.4234E+02	7.8896E+02	1.0088E+06	3.3805E+04	5.8697E+04	3.3983E+01	1.9279E+03	2.7884E+03	1.8359E+06
8.4234E+02	7.3636E+02	1.3463E+06	3.3805E+04	5.2175E+04	2.4965E+01	1.9279E+03	2.3236E+03	1.9080E+06
8.4234E+02	6.8376E+02	2.0020E+06	3.3805E+04	4.5653E+04	4.2171E+01	1.9279E+03	1.8589E+03	2.2851E+06
8.4234E+02	6.3116E+02	2.5050E+06	3.3805E+04	3.9131E+04	2.2089E+01	1.9279E+03	1.3942E+03	2.3088E+06
8.4234E+02	5.7857E+02	2.9500E+06	3.3805E+04	3.2609E+04	7.4701E+01	1.9279E+03	9.2946E+02	3.3507E+06
8.4234E+02	5.2597E+02	3.6115E+06	3.3805E+04	2.6088E+04	2.3893E+02	1.9279E+03	4.6473E+02	7.0034E+06
8.4234E+02	4.7337E+02	4.1994E+06	3.3805E+04	1.9566E+04	2.5945E+02	1.9279E+03	0.0000E+00	1.5427E+07
8.4234E+02	4.2078E+02	4.7594E+06	3.3805E+04	1.3044E+04	2.6526E+02	1.3778E+03	1.4871E+04	6.6460E-02
8.4234E+02	3.6818E+02	4.6792E+06	3.3805E+04	6.5219E+03	8.6989E+03	1.3778E+03	1.4407E+04	6.6460E-02
8.4234E+02	3.1558E+02	4.6886E+06	3.3805E+04	0.0000E+00	4.4883E+04	1.3778E+03	1.3012E+04	6.6460E-02
8.4234E+02	2.6299E+02	4.4849E+06	2.6234E+04	1.6957E+05	6.6460E-02	1.3778E+03	1.2548E+04	2.0275E+01
8.4234E+02	2.1039E+02	3.9807E+06	2.6234E+04	1.5653E+05	5.0892E+00	1.3778E+03	1.2083E+04	1.7889E+00
8.4234E+02	1.5779E+02	3.9114E+06	2.6234E+04	1.5000E+05	1.7500E+00	1.3778E+03	1.1618E+04	6.7548E+01
8.4234E+02	1.0519E+02	7.6756E+06	2.6234E+04	1.4348E+05	4.6696E+00	1.3778E+03	1.1153E+04	1.7081E+03
8.4234E+02	5.2597E+01	1.8723E+07	2.6234E+04	1.3696E+05	1.6696E+00	1.3778E+03	1.0689E+04	1.4932E+02
8.4234E+02	0.0000E+00	2.4458E+07	2.6234E+04	1.3044E+05	1.6696E+00	1.3778E+03	1.0224E+04	4.1159E+01
7.8010E+02	2.0513E+03	3.5382E+02	2.6234E+04	1.2392E+05	5.8750E+00	1.3778E+03	9.7593E+03	9.9772E+03
7.8010E+02	1.8935E+03	1.0815E+02	2.6234E+04	1.1739E+05	6.2500E-01	1.3778E+03	9.2946E+03	1.2437E+04
7.8010E+02	1.8409E+03	3.7770E+02	2.6234E+04	1.1087E+05	1.7500E+00	1.3778E+03	8.8298E+03	1.8505E+04
7.8010E+02	1.7883E+03	3.3294E+03	2.6234E+04	1.0435E+05	1.4086E+01	1.3778E+03	8.3651E+03	2.5419E+04
7.8010E+02	1.7357E+03	7.4464E+02	2.6234E+04	9.7828E+04	8.7500E+00	1.3778E+03	7.9004E+03	3.6066E+04
7.8010E+02	1.6831E+03	3.8165E+03	2.6234E+04	9.1306E+04	2.1332E+01	1.3778E+03	7.4356E+03	9.0301E+04
7.8010E+02	1.6305E+03	1.0490E+04	2.6234E+04	8.4784E+04	6.9721E+00	1.3778E+03	6.9709E+03	1.1863E+05
7.8010E+02	1.5779E+03	2.0068E+04	2.6234E+04	7.8263E+04	1.2170E+01	1.3778E+03	6.5062E+03	2.5953E+05
7.8010E+02	1.5253E+03	2.6751E+04	2.6234E+04	7.1741E+04	4.7631E+01	1.3778E+03	6.0415E+03	3.3095E+05
7.8010E+02	1.4727E+03	2.4817E+04	2.6234E+04	6.5219E+04	2.6089E+01	1.3778E+03	5.5767E+03	5.4179E+05
7.8010E+02	1.4201E+03	2.7049E+04	2.6234E+04	5.8697E+04	6.7371E+01	1.3778E+03	5.1120E+03	7.8688E+05
7.8010E+02	1.3675E+03	5.7528E+04	2.6234E+04	5.2175E+04	7.3917E+01	1.3778E+03	4.6473E+03	9.0301E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.8010E+02	1.3149E+03	7.0863E+04	2.6234E+04	4.5653E+04	7.5823E+01	1.3778E+03	4.1825E+03	1.3538E+06
7.8010E+02	1.2623E+03	1.6831E+05	2.6234E+04	3.9131E+04	1.3989E+02	1.3778E+03	3.7178E+03	1.9690E+06
7.8010E+02	1.2097E+03	1.9484E+05	2.6234E+04	3.2609E+04	1.9960E+02	1.3778E+03	3.2531E+03	2.2091E+06
7.8010E+02	1.1571E+03	3.4168E+05	2.6234E+04	2.6088E+04	1.3879E+02	1.3778E+03	2.7884E+03	2.9751E+06
7.8010E+02	1.1045E+03	4.5025E+05	2.6234E+04	1.9566E+04	8.8639E+03	1.3778E+03	2.3236E+03	3.3138E+06
7.8010E+02	1.0519E+03	6.0458E+05	2.6234E+04	1.3044E+04	1.9801E+04	1.3778E+03	1.8589E+03	3.5570E+06
7.8010E+02	9.9934E+02	7.3268E+05	2.6234E+04	6.5219E+03	1.1105E+05	1.3778E+03	1.3942E+03	3.8109E+06
7.8010E+02	9.4675E+02	1.2093E+06	2.6234E+04	0.0000E+00	2.1796E+05	1.3778E+03	9.2946E+02	4.8406E+06
7.8010E+02	8.9415E+02	1.3807E+06	1.8663E+04	1.6305E+05	6.6460E-02	1.3778E+03	4.6473E+02	1.1111E+07
7.8010E+02	8.4155E+02	1.7908E+06	1.8663E+04	1.5653E+05	3.3392E+00	1.3778E+03	0.0000E+00	2.5229E+07
7.8010E+02	7.8896E+02	2.3159E+06	1.8663E+04	1.5000E+05	1.6696E+00	8.2763E+02	1.6265E+04	6.6460E-02
7.8010E+02	7.3636E+02	3.0130E+06	1.8663E+04	1.4348E+05	6.9146E-01	8.2763E+02	1.5801E+04	9.1395E+00
7.8010E+02	6.8376E+02	3.4884E+06	1.8663E+04	1.3044E+05	6.9146E-01	8.2763E+02	1.5336E+04	2.1312E+02
7.8010E+02	6.3116E+02	4.2496E+06	1.8663E+04	1.2392E+05	1.3829E+00	8.2763E+02	1.4871E+04	1.0285E+02
7.8010E+02	5.7857E+02	5.0673E+06	1.8663E+04	1.1087E+05	1.8750E+00	8.2763E+02	1.4407E+04	2.4718E+02
7.8010E+02	5.2597E+02	6.1397E+06	1.8663E+04	1.0435E+05	1.7500E+00	8.2763E+02	1.3942E+04	4.5210E+01
7.8010E+02	4.7337E+02	6.6905E+06	1.8663E+04	9.7828E+04	4.0446E+00	8.2763E+02	1.3477E+04	2.4074E+01
7.8010E+02	4.2078E+02	6.8366E+06	1.8663E+04	9.1306E+04	3.5000E+00	8.2763E+02	1.3012E+04	2.2139E+02
7.8010E+02	3.6818E+02	7.2962E+06	1.8663E+04	8.4784E+04	1.9089E+01	8.2763E+02	1.2548E+04	2.7917E+03
7.8010E+02	3.1558E+02	6.7881E+06	1.8663E+04	7.8263E+04	6.2567E+01	8.2763E+02	1.2083E+04	2.5817E+02
7.8010E+02	2.6299E+02	6.4683E+06	1.8663E+04	7.1741E+04	5.9142E+01	8.2763E+02	1.1618E+04	8.8272E+02
7.8010E+02	2.1039E+02	5.3606E+06	1.8663E+04	6.5219E+04	9.9747E+01	8.2763E+02	1.1153E+04	1.0924E+04
7.8010E+02	1.5779E+02	5.5394E+06	1.8663E+04	5.8697E+04	1.3279E+02	8.2763E+02	1.0689E+04	7.0395E+03
7.8010E+02	1.0519E+02	9.5895E+06	1.8663E+04	5.2175E+04	2.1866E+03	8.2763E+02	1.0224E+04	8.0552E+03
7.8010E+02	5.2597E+01	2.2395E+07	1.8663E+04	4.5653E+04	2.3424E+03	8.2763E+02	9.7593E+03	1.9515E+04
7.8010E+02	0.0000E+00	2.9309E+07	1.8663E+04	3.9131E+04	2.5987E+03	8.2763E+02	9.2946E+03	1.4370E+04
7.1786E+02	2.2091E+03	2.0079E+02	1.8663E+04	3.2609E+04	2.3757E+03	8.2763E+02	8.8298E+03	3.8036E+04
7.1786E+02	2.1565E+03	2.3875E+01	1.8663E+04	2.6088E+04	9.2253E+03	8.2763E+02	8.3651E+03	8.7600E+04
7.1786E+02	2.1039E+03	5.7114E+01	1.8663E+04	1.9566E+04	9.3555E+03	8.2763E+02	7.9004E+03	8.0986E+04
7.1786E+02	2.0513E+03	1.9588E+03	1.8663E+04	1.3044E+04	1.0590E+04	8.2763E+02	7.4356E+03	1.2812E+05
7.1786E+02	1.9987E+03	2.2164E+03	1.8663E+04	6.5219E+03	1.6088E+05	8.2763E+02	6.9709E+03	1.8312E+05
7.1786E+02	1.9461E+03	5.0925E+02	1.8663E+04	0.0000E+00	7.4246E+05	8.2763E+02	6.5062E+03	2.8800E+05
7.1786E+02	1.8935E+03	6.3235E+02	1.1092E+04	1.6305E+05	6.6460E-02	8.2763E+02	6.0415E+03	4.4543E+05
7.1786E+02	1.8409E+03	1.6862E+03	1.1092E+04	1.4348E+05	3.3392E+00	8.2763E+02	5.5767E+03	6.9556E+05
7.1786E+02	1.7883E+03	2.8384E+03	1.1092E+04	1.3696E+05	1.6696E+00	8.2763E+02	5.1120E+03	9.3359E+05
7.1786E+02	1.7357E+03	8.1906E+03	1.1092E+04	1.2392E+05	5.7142E+00	8.2763E+02	4.6473E+03	1.3291E+06
7.1786E+02	1.6831E+03	1.1860E+04	1.1092E+04	1.1739E+05	6.2500E-01	8.2763E+02	4.1825E+03	1.3538E+06
7.1786E+02	1.6305E+03	8.2933E+03	1.1092E+04	1.1087E+05	1.9938E-01	8.2763E+02	3.7178E+03	2.5229E+07

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.1786E+02	1.5779E+03	2.1039E+04	1.1092E+04	1.0435E+05	6.9169E+00	8.2763E+02	3.2531E+03	2.7135E+06
7.1786E+02	1.5253E+03	2.0093E+04	1.1092E+04	9.7828E+04	5.5079E+00	8.2763E+02	2.7884E+03	3.9473E+06
7.1786E+02	1.4727E+03	6.0015E+04	1.1092E+04	9.1306E+04	7.4002E+03	8.2763E+02	2.3236E+03	5.3958E+06
7.1786E+02	1.4201E+03	4.8298E+04	1.1092E+04	8.4784E+04	1.4718E+04	8.2763E+02	1.8589E+03	6.2050E+06
7.1786E+02	1.3675E+03	7.2612E+04	1.1092E+04	7.8263E+04	4.5901E+01	8.2763E+02	1.3942E+03	6.5758E+06
7.1786E+02	1.3149E+03	1.1957E+05	1.1092E+04	7.1741E+04	1.4791E+04	8.2763E+02	9.2946E+02	7.8186E+06
7.1786E+02	1.2623E+03	1.7177E+05	1.1092E+04	6.5219E+04	5.8963E+04	8.2763E+02	4.6473E+02	1.7139E+07
7.1786E+02	1.2097E+03	2.1652E+05	1.1092E+04	5.8697E+04	7.6562E+03	8.2763E+02	0.0000E+00	3.8840E+07
7.1786E+02	1.1571E+03	2.6189E+05	1.1092E+04	5.2175E+04	7.7592E+03	2.7749E+02	1.7660E+04	6.6460E-02
7.1786E+02	1.1045E+03	3.4434E+05	1.1092E+04	4.5653E+04	1.9229E+04	2.7749E+02	1.6730E+04	6.6460E-02
7.1786E+02	1.0519E+03	5.1279E+05	1.1092E+04	3.9131E+04	4.1596E+04	2.7749E+02	1.6265E+04	2.1230E+00
7.1786E+02	9.9934E+02	7.0153E+05	1.1092E+04	3.2609E+04	3.0095E+04	2.7749E+02	1.5336E+04	1.9442E-01
7.1786E+02	9.4675E+02	8.6493E+05	1.1092E+04	2.6088E+04	5.3883E+03	2.7749E+02	1.4871E+04	3.3372E+01
7.1786E+02	8.9415E+02	1.1658E+06	1.1092E+04	1.9566E+04	4.3902E+04	2.7749E+02	1.4407E+04	5.5712E+02
7.1786E+02	8.4155E+02	1.4404E+06	1.1092E+04	1.3044E+04	1.0864E+05	2.7749E+02	1.3942E+04	1.2992E+03
7.1786E+02	7.8896E+02	1.9290E+06	1.1092E+04	6.5219E+03	7.2633E+05	2.7749E+02	1.3477E+04	1.1105E+04
7.1786E+02	7.3636E+02	2.4508E+06	1.1092E+04	0.0000E+00	5.2306E+06	2.7749E+02	1.3012E+04	2.1350E+03
7.1786E+02	6.8376E+02	3.2448E+06	3.5210E+03	3.2609E+05	1.6696E+00	2.7749E+02	1.2548E+04	8.8071E+03
7.1786E+02	6.3116E+02	3.6408E+06	3.5210E+03	3.0001E+05	1.6696E+00	2.7749E+02	1.2083E+04	1.4227E+04
7.1786E+02	5.7857E+02	4.7734E+06	3.5210E+03	1.6305E+05	2.3611E+00	2.7749E+02	1.1618E+04	3.3099E+04
7.1786E+02	5.2597E+02	5.1503E+06	3.5210E+03	1.5000E+05	1.8025E+00	2.7749E+02	1.1153E+04	7.8639E+04
7.1786E+02	4.7337E+02	5.8159E+06	3.5210E+03	1.4348E+05	1.3292E-01	2.7749E+02	1.0689E+04	7.2470E+04
7.1786E+02	4.2078E+02	6.1029E+06	3.5210E+03	1.3696E+05	8.2438E-01	2.7749E+02	1.0224E+04	4.9221E+04
7.1786E+02	3.6818E+02	6.1687E+06	3.5210E+03	1.3044E+05	6.6460E-02	2.7749E+02	9.7593E+03	6.4837E+04
7.1786E+02	3.1558E+02	5.9210E+06	3.5210E+03	1.2392E+05	4.7886E+00	2.7749E+02	9.2946E+03	7.1804E+04
7.1786E+02	2.6299E+02	5.3309E+06	3.5210E+03	1.1739E+05	1.5158E+00	2.7749E+02	8.8298E+03	6.4461E+04
7.1786E+02	2.1039E+02	4.6410E+06	3.5210E+03	1.1087E+05	7.3518E+03	2.7749E+02	8.3651E+03	1.1447E+05
7.1786E+02	1.5779E+02	4.9383E+06	3.5210E+03	1.0435E+05	2.9410E+04	2.7749E+02	7.9004E+03	1.3786E+05
7.1786E+02	1.0519E+02	8.7663E+06	3.5210E+03	9.7828E+04	2.2068E+04	2.7749E+02	7.4356E+03	2.0677E+05
7.1786E+02	5.2597E+01	2.2641E+07	3.5210E+03	9.1306E+04	4.4164E+04	2.7749E+02	6.9709E+03	3.5267E+05
7.1786E+02	0.0000E+00	3.0841E+07	3.5210E+03	8.4784E+04	3.6833E+04	2.7749E+02	6.5062E+03	4.1410E+05
6.5562E+02	2.3669E+03	1.8605E+02	3.5210E+03	7.8263E+04	1.5863E+05	2.7749E+02	6.0415E+03	5.8996E+05
6.5562E+02	2.2617E+03	1.8279E+01	3.5210E+03	7.1741E+04	6.6287E+04	2.7749E+02	5.5767E+03	8.4438E+05
6.5562E+02	2.1565E+03	9.1395E+00	3.5210E+03	6.5219E+04	1.0330E+05	2.7749E+02	5.1120E+03	1.2199E+06
6.5562E+02	2.1039E+03	1.7265E+02	3.5210E+03	5.8697E+04	1.0326E+05	2.7749E+02	4.6473E+03	1.6231E+06
6.5562E+02	2.0513E+03	2.6422E+02	3.5210E+03	5.2175E+04	1.5529E+05	2.7749E+02	4.1825E+03	1.9854E+06
6.5562E+02	1.9987E+03	3.9605E+02	3.5210E+03	4.5653E+04	2.5142E+05	2.7749E+02	3.7178E+03	2.5525E+06
6.5562E+02	1.9461E+03	4.2594E+03	3.5210E+03	3.9131E+04	3.3054E+05	2.7749E+02	3.2531E+03	3.09E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.5562E+02	1.8935E+03	9.3839E+02	3.5210E+03	3.2609E+04	4.6792E+05	2.7749E+02	2.7884E+03	4.7603E+06
6.5562E+02	1.8409E+03	6.9029E+02	3.5210E+03	2.6088E+04	9.3151E+05	2.7749E+02	2.3236E+03	6.6068E+06
6.5562E+02	1.7883E+03	6.5898E+03	3.5210E+03	1.9566E+04	2.2614E+06	2.7749E+02	1.8589E+03	8.1650E+06
6.5562E+02	1.7357E+03	3.9190E+03	3.5210E+03	1.3044E+04	3.3296E+06	2.7749E+02	1.3942E+03	9.7516E+06
6.5562E+02	1.6831E+03	5.5106E+03	3.5210E+03	6.5219E+03	5.2236E+06	2.7749E+02	9.2946E+02	1.0845E+07
6.5562E+02	1.6305E+03	9.8970E+03	3.5210E+03	0.0000E+00	1.8396E+07	2.7749E+02	4.6473E+02	2.3237E+07
6.5562E+02	1.5779E+03	2.5586E+04	- 4.0500E+03	2.0870E+05	6.6460E-02	2.7749E+02	0.0000E+00	5.2892E+07
6.5562E+02	1.5253E+03	3.5234E+04	- 4.0500E+03	2.0218E+05	6.6460E-02	- 2.7265E+02	1.8124E+04	6.6460E-02
6.5562E+02	1.4727E+03	2.8283E+04	- 4.0500E+03	1.8913E+05	6.6460E-02	- 2.7265E+02	1.6730E+04	3.2383E+00
6.5562E+02	1.4201E+03	5.4191E+04	- 4.0500E+03	1.8261E+05	6.6460E-02	- 2.7265E+02	1.5801E+04	1.7691E+02
6.5562E+02	1.3675E+03	9.0704E+04	- 4.0500E+03	1.7609E+05	6.6460E-02	- 2.7265E+02	1.5336E+04	2.6100E+02
6.5562E+02	1.3149E+03	7.9702E+04	- 4.0500E+03	1.6305E+05	1.3292E-01	- 2.7265E+02	1.4871E+04	2.9458E+02
6.5562E+02	1.2623E+03	1.4525E+05	- 4.0500E+03	1.5653E+05	1.3292E-01	- 2.7265E+02	1.4407E+04	6.9116E+02
6.5562E+02	1.2097E+03	1.3925E+05	- 4.0500E+03	1.5000E+05	2.4275E+00	- 2.7265E+02	1.3942E+04	2.6250E+03
6.5562E+02	1.1571E+03	2.8559E+05	- 4.0500E+03	1.4348E+05	1.3292E-01	- 2.7265E+02	1.3477E+04	4.2747E+03
6.5562E+02	1.1045E+03	3.0593E+05	- 4.0500E+03	1.3696E+05	6.7449E+00	- 2.7265E+02	1.3012E+04	1.5904E+04
6.5562E+02	1.0519E+03	3.9167E+05	- 4.0500E+03	1.3044E+05	2.0019E+00	- 2.7265E+02	1.2548E+04	5.0556E+04
6.5562E+02	9.9934E+02	4.7171E+05	- 4.0500E+03	1.2392E+05	2.8323E+00	- 2.7265E+02	1.2083E+04	1.1817E+05
6.5562E+02	9.4675E+02	7.3202E+05	- 4.0500E+03	1.1739E+05	7.2722E+00	- 2.7265E+02	1.1618E+04	1.0112E+05
6.5562E+02	8.9415E+02	1.0036E+06	- 4.0500E+03	1.1087E+05	3.1133E+00	- 2.7265E+02	1.1153E+04	9.6723E+04
6.5562E+02	8.4155E+02	1.3666E+06	- 4.0500E+03	1.0435E+05	3.7929E+00	- 2.7265E+02	1.0689E+04	1.1714E+05
6.5562E+02	7.8896E+02	1.5970E+06	- 4.0500E+03	9.7828E+04	7.3772E+03	- 2.7265E+02	1.0224E+04	8.3826E+04
6.5562E+02	7.3636E+02	2.0098E+06	- 4.0500E+03	9.1306E+04	7.3259E+01	- 2.7265E+02	9.7593E+03	9.4193E+04
6.5562E+02	6.8376E+02	2.5050E+06	- 4.0500E+03	8.4784E+04	9.4661E+03	- 2.7265E+02	9.2946E+03	9.1844E+04
6.5562E+02	6.3116E+02	2.8667E+06	- 4.0500E+03	7.8263E+04	5.1079E+01	- 2.7265E+02	8.8298E+03	1.7096E+05
6.5562E+02	5.7857E+02	3.5407E+06	- 4.0500E+03	7.1741E+04	7.2784E+01	- 2.7265E+02	8.3651E+03	1.6019E+05
6.5562E+02	5.2597E+02	3.7761E+06	- 4.0500E+03	6.5219E+04	8.6302E+03	- 2.7265E+02	7.9004E+03	1.6274E+05
6.5562E+02	4.7337E+02	4.2076E+06	- 4.0500E+03	5.8697E+04	7.5510E+03	- 2.7265E+02	7.4356E+03	2.7251E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.5562E+02	4.2078E+02	4.8112E+06	-	5.2175E+04	3.5440E+04	-	6.9709E+03	2.6759E+05
6.5562E+02	3.6818E+02	5.2720E+06	-	4.5653E+04	2.9416E+04	-	6.5062E+03	4.9016E+05
6.5562E+02	3.1558E+02	4.7559E+06	-	3.9131E+04	8.4494E+04	-	6.0415E+03	5.3269E+05
6.5562E+02	2.6299E+02	4.5575E+06	-	3.2609E+04	2.0124E+05	-	5.5767E+03	9.8504E+05
6.5562E+02	2.1039E+02	4.0690E+06	-	2.6088E+04	5.9131E+05	-	5.1120E+03	1.2917E+06
6.5562E+02	1.5779E+02	4.2243E+06	-	1.9566E+04	1.2847E+06	-	4.6473E+03	1.7802E+06
6.5562E+02	1.0519E+02	7.2719E+06	-	1.3044E+04	2.2096E+06	-	4.1825E+03	2.4754E+06
6.5562E+02	5.2597E+01	1.9835E+07	-	6.5219E+03	3.7152E+06	-	3.7178E+03	3.2545E+06
6.5562E+02	0.0000E+00	2.8418E+07	-	0.0000E+00	1.1082E+07	-	3.2531E+03	4.2000E+06
5.9339E+02	2.3669E+03	1.2183E+01	-	3.1305E+05	1.6696E+00	-	2.7884E+03	5.6222E+06
5.9339E+02	2.3143E+03	4.0229E+02	-	2.8696E+05	1.6696E+00	-	2.3236E+03	7.6071E+06
5.9339E+02	2.2617E+03	1.4218E+02	-	2.7392E+05	6.2500E-01	-	1.8589E+03	9.1020E+06
5.9339E+02	2.1565E+03	3.0231E+01	-	2.6088E+05	1.7500E+00	-	1.3942E+03	1.0278E+07
5.9339E+02	2.1039E+03	1.1267E+02	-	2.1522E+05	1.7500E+00	-	9.2946E+02	1.1445E+07
5.9339E+02	2.0513E+03	6.0878E+00	-	2.0870E+05	6.6460E-02	-	4.6473E+02	2.3543E+07
5.9339E+02	1.9987E+03	6.8784E+02	-	2.0218E+05	6.6460E-02	-	0.0000E+00	5.2316E+07
5.9339E+02	1.9461E+03	2.0974E+03	-	1.8913E+05	6.9146E-01	-	1.7660E+04	1.0418E+02
5.9339E+02	1.8935E+03	5.2889E+02	-	1.8261E+05	6.6460E-02	-	1.6265E+04	2.4825E+01
5.9339E+02	1.8409E+03	2.8334E+03	-	1.7609E+05	6.6460E-02	-	1.5801E+04	1.0075E+01
5.9339E+02	1.7883E+03	8.4377E+02	-	1.6957E+05	2.6584E-01	-	1.5336E+04	9.4545E+00
5.9339E+02	1.7357E+03	5.4653E+03	-	1.5653E+05	1.3292E-01	-	1.4871E+04	3.0765E+02
5.9339E+02	1.6831E+03	2.0439E+03	-	1.5000E+05	6.6460E-02	-	1.4407E+04	1.3487E+03
5.9339E+02	1.6305E+03	6.0432E+03	-	1.4348E+05	1.7361E+00	-	1.3942E+04	1.4706E+03
5.9339E+02	1.5779E+03	8.1015E+03	-	1.3696E+05	5.1417E+00	-	1.3477E+04	7.9262E+03
5.9339E+02	1.5253E+03	1.3403E+04	-	1.3044E+05	1.9938E-01	-	1.3012E+04	1.6156E+04
5.9339E+02	1.4727E+03	2.3154E+04	-	1.2392E+05	2.8544E-01	-	1.2548E+04	2.7770E+04
5.9339E+02	1.4201E+03	4.8892E+04	-	1.1739E+05	1.9707E-01	-	1.2083E+04	4.0170E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.9339E+02	1.3675E+03	5.0154E+04	-	1.1087E+05	6.1958E+01	-	1.1618E+04	5.8008E+04
5.9339E+02	1.3149E+03	6.7777E+04	-	1.0435E+05	9.3612E+01	-	1.1153E+04	8.5256E+04
5.9339E+02	1.2623E+03	8.6841E+04	-	9.7828E+04	2.4486E+03	-	1.0689E+04	8.7184E+04
5.9339E+02	1.2097E+03	1.2082E+05	-	9.1306E+04	4.2934E+02	-	1.0224E+04	5.0688E+04
5.9339E+02	1.1571E+03	1.5980E+05	-	8.4784E+04	4.6154E+02	-	9.7593E+03	1.0100E+05
5.9339E+02	1.1045E+03	1.9994E+05	-	7.8263E+04	5.1796E+02	-	9.2946E+03	9.9388E+04
5.9339E+02	1.0519E+03	2.9412E+05	-	7.1741E+04	3.2341E+03	-	8.8298E+03	1.1479E+05
5.9339E+02	9.9934E+02	3.4776E+05	-	6.5219E+04	7.8474E+03	-	8.3651E+03	1.2132E+05
5.9339E+02	9.4675E+02	3.9711E+05	-	5.8697E+04	1.4176E+04	-	7.9004E+03	2.0441E+05
5.9339E+02	8.9415E+02	5.7320E+05	-	5.2175E+04	2.8570E+04	-	7.4356E+03	1.8609E+05
5.9339E+02	8.4155E+02	7.4273E+05	-	4.5653E+04	5.7885E+04	-	6.9709E+03	2.6210E+05
5.9339E+02	7.8896E+02	1.0302E+06	-	3.9131E+04	2.0092E+05	-	6.5062E+03	4.8738E+05
5.9339E+02	7.3636E+02	1.2741E+06	-	3.2609E+04	4.5229E+05	-	6.0415E+03	6.1590E+05
5.9339E+02	6.8376E+02	1.5247E+06	-	2.6088E+04	9.1297E+05	-	5.5767E+03	8.9965E+05
5.9339E+02	6.3116E+02	1.8566E+06	-	1.9566E+04	1.6695E+06	-	5.1120E+03	1.2501E+06
5.9339E+02	5.7857E+02	2.1211E+06	-	1.3044E+04	2.0688E+06	-	4.6473E+03	1.6392E+06
5.9339E+02	5.2597E+02	2.7600E+06	-	6.5219E+03	4.5779E+06	-	4.1825E+03	2.1622E+06
5.9339E+02	4.7337E+02	3.1299E+06	-	0.0000E+00	9.9383E+06	-	3.7178E+03	2.8963E+06
5.9339E+02	4.2078E+02	3.0395E+06	-	3.1957E+05	1.6696E+00	-	3.2531E+03	3.6049E+06
5.9339E+02	3.6818E+02	3.6288E+06	-	3.0653E+05	5.0088E+00	-	2.7884E+03	4.5834E+06
5.9339E+02	3.1558E+02	3.3074E+06	-	2.9348E+05	3.4196E+00	-	2.3236E+03	5.5168E+06
5.9339E+02	2.6299E+02	3.6233E+06	-	2.8696E+05	3.3392E+00	-	1.8589E+03	6.2823E+06
5.9339E+02	2.1039E+02	3.4490E+06	-	2.8044E+05	6.8392E+00	-	1.3942E+03	6.5538E+06
5.9339E+02	1.5779E+02	3.7118E+06	-	2.7392E+05	5.2500E+00	-	9.2946E+02	7.9661E+06
5.9339E+02	1.0519E+02	5.8778E+06	-	2.6740E+05	3.5665E+00	-	4.6473E+02	1.8826E+07
5.9339E+02	5.2597E+01	1.7410E+07	-	2.6088E+05	1.7500E+00	-	0.0000E+00	3.9747E+07
5.9339E+02	0.0000E+00	2.7952E+07	-	2.5435E+05	3.5000E+00	-	1.7660E+01	5.0439E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.3115E+02	2.3669E+03	3.0439E+00	- 1.9192E+04	2.4783E+05	1.7500E+00	- 1.3729E+03	1.6730E+04	9.1395E+00
5.3115E+02	2.2617E+03	3.6283E+01	- 1.9192E+04	2.2827E+05	1.8165E+00	- 1.3729E+03	1.6265E+04	1.9442E-01
5.3115E+02	2.2091E+03	1.2176E+01	- 1.9192E+04	2.0870E+05	6.6460E-02	- 1.3729E+03	1.5801E+04	2.2427E-01
5.3115E+02	2.1565E+03	4.2379E+01	- 1.9192E+04	2.0218E+05	6.2500E-01	- 1.3729E+03	1.5336E+04	6.9058E+01
5.3115E+02	2.1039E+03	1.9155E+01	- 1.9192E+04	1.9566E+05	2.6584E-01	- 1.3729E+03	1.4871E+04	3.6347E+01
5.3115E+02	2.0513E+03	2.8232E+02	- 1.9192E+04	1.8913E+05	6.6460E-02	- 1.3729E+03	1.4407E+04	2.7841E+02
5.3115E+02	1.9987E+03	1.2400E+02	- 1.9192E+04	1.7609E+05	1.3292E-01	- 1.3729E+03	1.3942E+04	3.3123E+02
5.3115E+02	1.9461E+03	6.3001E+02	- 1.9192E+04	1.6957E+05	1.9938E-01	- 1.3729E+03	1.3477E+04	7.7094E+02
5.3115E+02	1.8935E+03	1.0476E+03	- 1.9192E+04	1.6305E+05	1.3292E-01	- 1.3729E+03	1.3012E+04	4.2029E+03
5.3115E+02	1.8409E+03	1.2250E+03	- 1.9192E+04	1.5653E+05	1.7361E+00	- 1.3729E+03	1.2548E+04	2.7998E+03
5.3115E+02	1.7883E+03	1.1785E+03	- 1.9192E+04	1.5000E+05	2.6584E-01	- 1.3729E+03	1.2083E+04	5.5118E+03
5.3115E+02	1.7357E+03	2.0948E+03	- 1.9192E+04	1.4348E+05	2.5763E+00	- 1.3729E+03	1.1618E+04	7.0896E+03
5.3115E+02	1.6831E+03	4.2672E+03	- 1.9192E+04	1.3696E+05	1.9938E-01	- 1.3729E+03	1.1153E+04	1.3662E+04
5.3115E+02	1.6305E+03	6.4106E+03	- 1.9192E+04	1.3044E+05	1.0604E+02	- 1.3729E+03	1.0689E+04	3.7112E+04
5.3115E+02	1.5779E+03	2.8469E+03	- 1.9192E+04	1.2392E+05	2.0847E+02	- 1.3729E+03	1.0224E+04	3.6354E+04
5.3115E+02	1.5253E+03	1.4717E+04	- 1.9192E+04	1.1739E+05	1.3565E+02	- 1.3729E+03	9.7593E+03	5.5768E+04
5.3115E+02	1.4727E+03	7.5713E+03	- 1.9192E+04	1.1087E+05	6.8738E+01	- 1.3729E+03	9.2946E+03	9.4871E+04
5.3115E+02	1.4201E+03	1.5532E+04	- 1.9192E+04	1.0435E+05	2.3280E+03	- 1.3729E+03	8.8298E+03	8.0304E+04
5.3115E+02	1.3675E+03	2.0156E+04	- 1.9192E+04	9.7828E+04	2.1548E+03	- 1.3729E+03	8.3651E+03	1.0020E+05
5.3115E+02	1.3149E+03	2.6892E+04	- 1.9192E+04	9.1306E+04	1.1364E+02	- 1.3729E+03	7.9004E+03	1.4099E+05
5.3115E+02	1.2623E+03	6.2433E+04	- 1.9192E+04	8.4784E+04	3.5351E+03	- 1.3729E+03	7.4356E+03	1.7520E+05
5.3115E+02	1.2097E+03	4.7180E+04	- 1.9192E+04	7.8263E+04	2.3563E+03	- 1.3729E+03	6.9709E+03	3.0384E+05
5.3115E+02	1.1571E+03	6.2014E+04	- 1.9192E+04	7.1741E+04	5.6127E+03	- 1.3729E+03	6.5062E+03	4.2765E+05
5.3115E+02	1.1045E+03	1.0600E+05	- 1.9192E+04	6.5219E+04	1.3893E+04	- 1.3729E+03	6.0415E+03	6.0640E+05
5.3115E+02	1.0519E+03	1.2622E+05	- 1.9192E+04	5.8697E+04	2.3159E+04	- 1.3729E+03	5.5767E+03	7.3357E+05
5.3115E+02	9.9934E+02	1.7684E+05	- 1.9192E+04	5.2175E+04	4.4387E+04	- 1.3729E+03	5.1120E+03	1.0805E+06
5.3115E+02	9.4675E+02	2.4728E+05	- 1.9192E+04	4.5653E+04	8.2043E+04	- 1.3729E+03	4.6473E+03	1.3107E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.3115E+02	8.9415E+02	2.5240E+05	-	3.9131E+04	2.1012E+05	-	4.1825E+03	1.6093E+06
5.3115E+02	8.4155E+02	3.5499E+05	-	3.2609E+04	6.2001E+05	-	3.7178E+03	2.4854E+06
5.3115E+02	7.8896E+02	4.0051E+05	-	2.6088E+04	1.8052E+06	-	3.2531E+03	2.6979E+06
5.3115E+02	7.3636E+02	4.5793E+05	-	1.9566E+04	4.0235E+06	-	2.7884E+03	3.1946E+06
5.3115E+02	6.8376E+02	6.9605E+05	-	1.3044E+04	6.6513E+06	-	2.3236E+03	3.7686E+06
5.3115E+02	6.3116E+02	6.3406E+05	-	6.5219E+03	1.2179E+07	-	1.8589E+03	3.6244E+06
5.3115E+02	5.7857E+02	7.7769E+05	-	0.0000E+00	2.1712E+07	-	1.3942E+03	3.9375E+06
5.3115E+02	5.2597E+02	9.1007E+05	-	3.1957E+05	1.6696E+00	-	9.2946E+02	5.7411E+06
5.3115E+02	4.7337E+02	1.2111E+06	-	3.0653E+05	1.6696E+00	-	4.6473E+02	1.2842E+07
5.3115E+02	4.2078E+02	1.5118E+06	-	2.8696E+05	8.2605E+00	-	0.0000E+00	2.6846E+07
5.3115E+02	3.6818E+02	1.8601E+06	-	2.8044E+05	6.5105E+00	-	1.8589E+04	6.6460E-02
5.3115E+02	3.1558E+02	2.6531E+06	-	2.7392E+05	6.9196E+00	-	1.7195E+04	1.1138E+00
5.3115E+02	2.6299E+02	3.0447E+06	-	2.6740E+05	8.6696E+00	-	1.6265E+04	3.0439E+00
5.3115E+02	2.1039E+02	3.5944E+06	-	2.6088E+05	3.5000E+00	-	1.5801E+04	9.6530E+00
5.3115E+02	1.5779E+02	4.0159E+06	-	2.5435E+05	7.0000E+00	-	1.5336E+04	1.9305E+00
5.3115E+02	1.0519E+02	5.8565E+06	-	2.4783E+05	2.4415E+00	-	1.4871E+04	1.8046E+00
5.3115E+02	5.2597E+01	1.8892E+07	-	2.4131E+05	6.2500E-01	-	1.4407E+04	2.6539E+01
5.3115E+02	0.0000E+00	3.4008E+07	-	2.3479E+05	1.7500E+00	-	1.3942E+04	1.7221E+02
4.6891E+02	2.3143E+03	1.2033E+00	-	2.2827E+05	1.2500E+00	-	1.3477E+04	3.1299E+02
4.6891E+02	2.2617E+03	2.5296E+02	-	2.2174E+05	6.2500E-01	-	1.3012E+04	3.0663E+02
4.6891E+02	2.1565E+03	1.7691E+02	-	2.0218E+05	1.3292E-01	-	1.2548E+04	6.0976E+02
4.6891E+02	2.1039E+03	1.1896E+02	-	1.8261E+05	2.6584E-01	-	1.2083E+04	5.5301E+02
4.6891E+02	2.0513E+03	1.9863E+02	-	1.7609E+05	6.6460E-02	-	1.1618E+04	2.2856E+03
4.6891E+02	1.9987E+03	1.2881E+02	-	1.6305E+05	7.5792E-01	-	1.1153E+04	4.1857E+03
4.6891E+02	1.9461E+03	2.8631E+03	-	1.5653E+05	1.3292E-01	-	1.0689E+04	5.9968E+03
4.6891E+02	1.8935E+03	4.1600E+01	-	1.5000E+05	2.1669E+01	-	1.0224E+04	5.6779E+03
4.6891E+02	1.8409E+03	9.3094E+02	-	1.4348E+05	2.4324E+01	-	9.7593E+05	9.2827E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6891E+02	1.7883E+03	5.3106E+02	-	1.3696E+05	2.6262E+00	-	9.2946E+03	2.7524E+04
4.6891E+02	1.7357E+03	2.7333E+03	-	1.3044E+05	1.6402E+01	-	8.8298E+03	3.2591E+04
4.6891E+02	1.6831E+03	6.6157E+03	-	1.2392E+05	2.8387E+00	-	8.3651E+03	4.3354E+04
4.6891E+02	1.6305E+03	1.5401E+03	-	1.1739E+05	3.0271E+01	-	7.9004E+03	9.3195E+04
4.6891E+02	1.5779E+03	1.4153E+03	-	1.1087E+05	2.9958E+01	-	7.4356E+03	1.2100E+05
4.6891E+02	1.5253E+03	1.1658E+03	-	1.0435E+05	1.1855E+03	-	6.9709E+03	2.3874E+05
4.6891E+02	1.4727E+03	2.7666E+03	-	9.7828E+04	8.7817E+01	-	6.5062E+03	3.1384E+05
4.6891E+02	1.4201E+03	8.7527E+03	-	9.1306E+04	5.8683E+02	-	6.0415E+03	4.7090E+05
4.6891E+02	1.3675E+03	9.6497E+03	-	8.4784E+04	5.3006E+02	-	5.5767E+03	6.3932E+05
4.6891E+02	1.3149E+03	1.1437E+04	-	7.8263E+04	1.0124E+04	-	5.1120E+03	8.3248E+05
4.6891E+02	1.2623E+03	2.0936E+04	-	7.1741E+04	1.5727E+04	-	4.6473E+03	1.2790E+06
4.6891E+02	1.2097E+03	1.0243E+04	-	6.5219E+04	1.0273E+04	-	4.1825E+03	1.6319E+06
4.6891E+02	1.1571E+03	1.8262E+04	-	5.8697E+04	4.2503E+04	-	3.7178E+03	1.8357E+06
4.6891E+02	1.1045E+03	1.9501E+04	-	5.2175E+04	8.9151E+04	-	3.2531E+03	2.2084E+06
4.6891E+02	1.0519E+03	3.8902E+04	-	4.5653E+04	1.1167E+05	-	2.7884E+03	2.6434E+06
4.6891E+02	9.9934E+02	6.2745E+04	-	3.9131E+04	2.5470E+05	-	2.3236E+03	2.6242E+06
4.6891E+02	9.4675E+02	8.2462E+04	-	3.2609E+04	6.1444E+05	-	1.8589E+03	2.8551E+06
4.6891E+02	8.9415E+02	6.9669E+04	-	2.6088E+04	1.8717E+06	-	1.3942E+03	2.5882E+06
4.6891E+02	8.4155E+02	9.3998E+04	-	1.9566E+04	5.0614E+06	-	9.2946E+02	3.7981E+06
4.6891E+02	7.8896E+02	1.0861E+05	-	1.3044E+04	8.9379E+06	-	4.6473E+02	9.1840E+06
4.6891E+02	7.3636E+02	1.4504E+05	-	6.5219E+03	1.6160E+07	-	0.0000E+00	1.7769E+07
4.6891E+02	6.8376E+02	1.8863E+05	-	0.0000E+00	2.7128E+07	-	2.0448E+04	6.6460E-02
4.6891E+02	6.3116E+02	2.1391E+05	-	3.0653E+05	1.6696E+00	-	1.6730E+04	6.6460E-02
4.6891E+02	5.7857E+02	3.2039E+05	-	2.9348E+05	3.3392E+00	-	1.6265E+04	3.2607E-01
4.6891E+02	5.2597E+02	2.6606E+05	-	2.8696E+05	5.0892E+00	-	1.5336E+04	9.6600E+00
4.6891E+02	4.7337E+02	5.8454E+05	-	2.8044E+05	8.4284E+00	-	1.4871E+04	2.6257E+00
4.6891E+02	4.2078E+02	7.8155E+05	-	2.7392E+05	1.0010E+01	-	1.4407E+04	2.4402E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6891E+02	3.6818E+02	1.3813E+06	-	2.6740E+05	2.5030E+01	-	1.3942E+04	3.8853E+00
4.6891E+02	3.1558E+02	2.3666E+06	-	2.6088E+05	1.3350E+01	-	1.3477E+04	7.4828E+00
4.6891E+02	2.6299E+02	3.7145E+06	-	2.5435E+05	3.4196E+00	-	1.3012E+04	1.3650E+01
4.6891E+02	2.1039E+02	5.2814E+06	-	2.4783E+05	7.1355E+00	-	1.2548E+04	2.6127E+01
4.6891E+02	1.5779E+02	6.2513E+06	-	2.4131E+05	1.7500E+00	-	1.2083E+04	5.3306E+02
4.6891E+02	1.0519E+02	8.2362E+06	-	2.2174E+05	6.2500E-01	-	1.1618E+04	3.3608E+02
4.6891E+02	5.2597E+01	2.0380E+07	-	2.1522E+05	1.2500E+00	-	1.1153E+04	3.8743E+02
4.6891E+02	0.0000E+00	3.9985E+07	-	2.0870E+05	6.9146E-01	-	1.0689E+04	1.4352E+02
4.0667E+02	2.5247E+03	8.9160E+00	-	2.0218E+05	4.2579E+00	-	1.0224E+04	1.2298E+03
4.0667E+02	2.3669E+03	6.5105E+00	-	1.8913E+05	6.2500E-01	-	9.7593E+03	5.3067E+02
4.0667E+02	2.3143E+03	1.9938E-01	-	1.8261E+05	6.9146E-01	-	9.2946E+03	1.8721E+03
4.0667E+02	2.2617E+03	3.0439E+00	-	1.7609E+05	2.1987E-01	-	8.8298E+03	2.7731E+03
4.0667E+02	2.2091E+03	3.1973E+00	-	1.6957E+05	1.5444E+01	-	8.3651E+03	8.4135E+03
4.0667E+02	2.1565E+03	4.7135E+00	-	1.6305E+05	8.4487E-01	-	7.9004E+03	2.4007E+04
4.0667E+02	2.1039E+03	4.0398E+01	-	1.5653E+05	1.4822E+01	-	7.4356E+03	6.1649E+04
4.0667E+02	2.0513E+03	7.6556E+01	-	1.5000E+05	2.7379E-01	-	6.9709E+03	1.2887E+05
4.0667E+02	1.9987E+03	3.2513E+02	-	1.4348E+05	1.4533E+01	-	6.5062E+03	1.7996E+05
4.0667E+02	1.9461E+03	1.0801E+02	-	1.3696E+05	1.1960E+00	-	6.0415E+03	2.9577E+05
4.0667E+02	1.8935E+03	9.6042E+02	-	1.3044E+05	4.0065E+00	-	5.5767E+03	4.2471E+05
4.0667E+02	1.8409E+03	3.1483E+01	-	1.2392E+05	1.2088E+02	-	5.1120E+03	5.0788E+05
4.0667E+02	1.7883E+03	1.5340E+01	-	1.1739E+05	2.4385E+02	-	4.6473E+03	7.5488E+05
4.0667E+02	1.7357E+03	5.6689E+02	-	1.1087E+05	4.4794E+02	-	4.1825E+03	1.0795E+06
4.0667E+02	1.6831E+03	2.7112E+02	-	1.0435E+05	1.9091E+02	-	3.7178E+03	1.3361E+06
4.0667E+02	1.6305E+03	7.1029E+02	-	9.7828E+04	1.9939E+03	-	3.2531E+03	1.4907E+06
4.0667E+02	1.5779E+03	8.6240E+02	-	9.1306E+04	1.3852E+03	-	2.7884E+03	1.7578E+06
4.0667E+02	1.5253E+03	8.4940E+02	-	8.4784E+04	6.4759E+03	-	2.3236E+03	1.8271E+06
4.0667E+02	1.4727E+03	5.9599E+03	-	7.8263E+04	1.1939E+03	-	1.8589E+05	1.7582E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.0667E+02	1.4201E+03	1.5229E+03	-	7.1741E+04	1.2541E+04	-	1.3942E+03	1.7377E+06
4.0667E+02	1.3675E+03	1.8048E+03	-	6.5219E+04	1.6754E+04	-	9.2946E+02	2.8173E+06
4.0667E+02	1.3149E+03	2.3045E+03	-	5.8697E+04	1.4713E+04	-	4.6473E+02	6.3181E+06
4.0667E+02	1.2623E+03	2.1220E+03	-	5.2175E+04	3.4204E+04	-	0.0000E+00	1.2486E+07
4.0667E+02	1.2097E+03	2.6043E+03	-	4.5653E+04	9.5051E+04	-	2.1377E+04	6.6460E-02
4.0667E+02	1.1571E+03	3.3787E+03	-	3.9131E+04	2.2282E+05	-	1.7195E+04	3.4550E+00
4.0667E+02	1.1045E+03	1.2047E+04	-	3.2609E+04	5.8537E+05	-	1.5801E+04	4.4746E+00
4.0667E+02	1.0519E+03	1.1296E+04	-	2.6088E+04	1.5692E+06	-	1.5336E+04	2.9305E+00
4.0667E+02	9.9934E+02	1.3560E+04	-	1.9566E+04	3.6989E+06	-	1.4871E+04	3.2607E-01
4.0667E+02	9.4675E+02	1.7995E+04	-	1.3044E+04	6.6923E+06	-	1.4407E+04	3.4725E+00
4.0667E+02	8.9415E+02	2.0621E+04	-	6.5219E+03	1.1985E+07	-	1.3942E+04	1.2541E+00
4.0667E+02	8.4155E+02	1.9295E+04	-	0.0000E+00	2.0379E+07	-	1.3477E+04	2.5080E+00
4.0667E+02	7.8896E+02	3.4269E+04	-	2.9348E+05	1.6696E+00	-	1.3012E+04	1.2253E+02
4.0667E+02	7.3636E+02	4.0485E+04	-	2.8696E+05	1.3021E+01	-	1.2548E+04	3.8883E-01
4.0667E+02	6.8376E+02	5.7162E+04	-	2.8044E+05	9.9301E+00	-	1.2083E+04	1.6240E+01
4.0667E+02	6.3116E+02	6.3515E+04	-	2.7392E+05	8.2466E+00	-	1.1618E+04	3.2640E+00
4.0667E+02	5.7857E+02	1.2428E+05	-	2.6740E+05	1.0178E+01	-	1.1153E+04	7.5925E+00
4.0667E+02	5.2597E+02	1.8694E+05	-	2.6088E+05	1.9531E+01	-	1.0689E+04	3.9956E+00
4.0667E+02	4.7337E+02	3.8321E+05	-	2.5435E+05	1.4837E+01	-	1.0224E+04	1.2019E+02
4.0667E+02	4.2078E+02	5.5629E+05	-	2.4783E+05	1.1600E+01	-	9.7593E+03	1.9217E+02
4.0667E+02	3.6818E+02	1.1555E+06	-	2.4131E+05	1.1291E+01	-	9.2946E+03	6.5344E+02
4.0667E+02	3.1558E+02	2.1424E+06	-	2.3479E+05	2.3750E+00	-	8.8298E+03	4.8614E+02
4.0667E+02	2.6299E+02	3.4013E+06	-	2.2827E+05	1.3666E+01	-	8.3651E+03	3.0111E+03
4.0667E+02	2.1039E+02	5.8942E+06	-	2.2174E+05	6.2500E-01	-	7.9004E+03	1.1018E+04
4.0667E+02	1.5779E+02	6.9894E+06	-	2.1522E+05	7.5792E-01	-	7.4356E+03	4.2038E+03
4.0667E+02	1.0519E+02	8.2229E+06	-	2.0870E+05	7.0000E+00	-	6.9709E+03	8.9939E+03
4.0667E+02	5.2597E+01	1.8471E+07	-	2.0218E+05	3.6329E+00	-	6.5062E+05	5.0332E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.0667E+02	0.0000E+00	3.9304E+07	-	1.9566E+05	2.5866E+01	-	6.0415E+03	6.6030E+04
3.4443E+02	2.5247E+03	1.7500E+00	-	1.8913E+05	1.3362E+00	-	5.5767E+03	1.4164E+05
3.4443E+02	2.4195E+03	1.7361E+00	-	1.8261E+05	2.7416E+01	-	5.1120E+03	3.2420E+05
3.4443E+02	2.3143E+03	1.6696E+00	-	1.7609E+05	1.3245E+01	-	4.6473E+03	4.6016E+05
3.4443E+02	2.2617E+03	6.2500E-01	-	1.6957E+05	4.4551E-02	-	4.1825E+03	5.7182E+05
3.4443E+02	2.2091E+03	7.1355E+00	-	1.6305E+05	1.3601E+01	-	3.7178E+03	7.9627E+05
3.4443E+02	2.1565E+03	7.9599E+00	-	1.5653E+05	3.6894E+00	-	3.2531E+03	1.0070E+06
3.4443E+02	2.1039E+03	1.8165E+00	-	1.5000E+05	3.4782E-01	-	2.7884E+03	1.1004E+06
3.4443E+02	2.0513E+03	1.8546E+01	-	1.4348E+05	1.5709E+00	-	2.3236E+03	1.0227E+06
3.4443E+02	1.9987E+03	1.7833E+01	-	1.3696E+05	5.4558E+00	-	1.8589E+03	1.1661E+06
3.4443E+02	1.9461E+03	2.9053E+01	-	1.3044E+05	2.8482E+01	-	1.3942E+03	1.0344E+06
3.4443E+02	1.8935E+03	1.3485E+01	-	1.2392E+05	7.5348E+01	-	9.2946E+02	1.7801E+06
3.4443E+02	1.8409E+03	2.4763E+01	-	1.1739E+05	3.5824E+02	-	4.6473E+02	3.7805E+06
3.4443E+02	1.7883E+03	4.6839E+01	-	1.1087E+05	2.8427E+02	-	0.0000E+00	7.8299E+06
3.4443E+02	1.7357E+03	2.8483E+03	-	1.0435E+05	5.1273E+02	-	1.6730E+04	2.9860E-02
3.4443E+02	1.6831E+03	1.2575E+01	-	9.7828E+04	1.0050E+03	-	1.6265E+04	2.1895E+00
3.4443E+02	1.6305E+03	1.8263E+01	-	9.1306E+04	1.5140E+03	-	1.5801E+04	2.9860E-02
3.4443E+02	1.5779E+03	6.1724E+01	-	8.4784E+04	1.0621E+03	-	1.3942E+04	5.5034E-01
3.4443E+02	1.5253E+03	1.6626E+02	-	7.8263E+04	1.3719E+03	-	1.3012E+04	1.5341E-01
3.4443E+02	1.4727E+03	2.6944E+02	-	7.1741E+04	3.4536E+03	-	1.2548E+04	8.6831E-01
3.4443E+02	1.4201E+03	2.6051E+02	-	6.5219E+04	9.3521E+03	-	1.2083E+04	7.4846E-01
3.4443E+02	1.3675E+03	3.3103E+02	-	5.8697E+04	1.2990E+04	-	1.1618E+04	3.9680E-01
3.4443E+02	1.3149E+03	9.2039E+02	-	5.2175E+04	5.0716E+04	-	1.1153E+04	4.1726E+00
3.4443E+02	1.2623E+03	1.1212E+03	-	4.5653E+04	1.6026E+05	-	1.0689E+04	6.0171E-01
3.4443E+02	1.2097E+03	1.4053E+03	-	3.9131E+04	3.5978E+05	-	1.0224E+04	2.0362E+00
3.4443E+02	1.1571E+03	1.8416E+03	-	3.2609E+04	9.6115E+05	-	9.7593E+03	4.3523E+00
3.4443E+02	1.1045E+03	2.4040E+03	-	2.6088E+04	1.9305E+06	-	9.2946E+05	6.3035E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.4443E+02	1.0519E+03	2.9766E+03	-	1.9566E+04	3.3116E+06	-	8.8298E+03	9.1743E+00
3.4443E+02	9.9934E+02	4.4510E+03	-	1.3044E+04	4.5723E+06	-	8.3651E+03	2.3023E+02
3.4443E+02	9.4675E+02	8.3299E+03	-	6.5219E+03	9.3730E+06	-	7.9004E+03	4.1695E+02
3.4443E+02	8.9415E+02	1.8026E+04	-	0.0000E+00	1.2861E+07	-	7.4356E+03	3.9207E+02
3.4443E+02	8.4155E+02	2.0592E+04	-	2.8696E+05	1.6696E+00	-	6.9709E+03	6.0826E+03
3.4443E+02	7.8896E+02	2.1695E+04	-	2.7392E+05	1.7500E+00	-	6.5062E+03	1.1962E+04
3.4443E+02	7.3636E+02	3.5114E+04	-	2.6740E+05	9.8497E+00	-	6.0415E+03	9.7215E+03
3.4443E+02	6.8376E+02	7.2136E+04	-	2.6088E+05	1.7500E+00	-	5.5767E+03	5.9721E+04
3.4443E+02	6.3116E+02	1.1937E+05	-	2.4783E+05	1.0652E+01	-	5.1120E+03	9.6510E+04
3.4443E+02	5.7857E+02	2.0204E+05	-	2.4131E+05	5.1696E+00	-	4.6473E+03	1.9033E+05
3.4443E+02	5.2597E+02	2.8611E+05	-	2.3479E+05	9.8497E+00	-	4.1825E+03	2.4851E+05
3.4443E+02	4.7337E+02	5.0043E+05	-	2.2827E+05	6.5770E+00	-	3.7178E+03	3.8108E+05
3.4443E+02	4.2078E+02	7.2769E+05	-	2.2174E+05	2.9512E+01	-	3.2531E+03	5.1575E+05
3.4443E+02	3.6818E+02	1.7882E+06	-	2.1522E+05	6.9146E-01	-	2.7884E+03	5.0562E+05
3.4443E+02	3.1558E+02	2.6106E+06	-	2.0870E+05	6.5303E+00	-	2.3236E+03	6.4064E+05
3.4443E+02	2.6299E+02	4.6934E+06	-	2.0218E+05	1.5055E+01	-	1.8589E+03	5.5263E+05
3.4443E+02	2.1039E+02	6.9299E+06	-	1.9566E+05	2.1473E+01	-	1.3942E+03	6.5224E+05
3.4443E+02	1.5779E+02	8.4373E+06	-	1.8913E+05	1.9496E+01	-	9.2946E+02	9.3566E+05
3.4443E+02	1.0519E+02	8.6759E+06	-	1.8261E+05	3.6614E+00	-	4.6473E+02	2.6060E+06
3.4443E+02	5.2597E+01	1.3068E+07	-	1.7609E+05	2.9436E+00	-	0.0000E+00	5.2251E+06
3.4443E+02	0.0000E+00	3.5058E+07	-	1.6957E+05	1.0480E+01	-	2.2772E+04	6.6460E-02
2.8219E+02	2.5773E+03	1.8165E+00	-	1.6305E+05	1.5499E+00	-	2.0913E+04	6.6460E-02
2.8219E+02	2.2617E+03	1.0732E+01	-	1.5653E+05	3.7815E-01	-	1.6265E+04	1.5341E-01
2.8219E+02	2.2091E+03	2.8259E+01	-	1.5000E+05	2.5579E+01	-	1.5336E+04	2.9860E-02
2.8219E+02	2.1565E+03	1.2211E+01	-	1.4348E+05	2.6953E+01	-	1.4871E+04	2.5000E+00
2.8219E+02	2.1039E+03	7.3802E+00	-	1.3696E+05	1.3130E+00	-	1.3942E+04	2.9860E-02
2.8219E+02	2.0513E+03	4.2440E+00	-	1.3044E+05	1.3882E+02	-	1.3012E+04	2.9860E-02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.8219E+02	1.9987E+03	1.4254E+01	-	1.2392E+05	1.1702E+02	-	1.2548E+04	6.5214E-01
2.8219E+02	1.9461E+03	2.5999E+02	-	1.1739E+05	8.8067E+01	-	1.2083E+04	6.9146E-01
2.8219E+02	1.8935E+03	7.5446E+00	-	1.1087E+05	6.2216E+02	-	1.1153E+04	9.1133E-01
2.8219E+02	1.8409E+03	1.0346E+01	-	1.0435E+05	1.0466E+03	-	1.0689E+04	1.3292E-01
2.8219E+02	1.7883E+03	2.4072E+01	-	9.7828E+04	5.4077E+02	-	1.0224E+04	1.2500E+00
2.8219E+02	1.7357E+03	2.2716E+01	-	9.1306E+04	4.7003E+02	-	9.2946E+03	3.9777E+00
2.8219E+02	1.6831E+03	4.3835E-01	-	8.4784E+04	4.7756E+03	-	8.8298E+03	1.1652E+02
2.8219E+02	1.6305E+03	3.5698E+01	-	7.8263E+04	3.2117E+03	-	8.3651E+03	1.4947E+00
2.8219E+02	1.5779E+03	3.8879E+01	-	7.1741E+04	7.5138E+03	-	7.9004E+03	1.8845E+02
2.8219E+02	1.5253E+03	1.0462E+01	-	6.5219E+04	1.3235E+04	-	7.4356E+03	7.2484E+01
2.8219E+02	1.4727E+03	5.5645E+01	-	5.8697E+04	4.8241E+04	-	6.9709E+03	2.1975E+03
2.8219E+02	1.4201E+03	1.5844E+02	-	5.2175E+04	5.2699E+04	-	6.5062E+03	7.2910E+02
2.8219E+02	1.3675E+03	1.2113E+02	-	4.5653E+04	1.0913E+05	-	6.0415E+03	7.6013E+03
2.8219E+02	1.3149E+03	2.2026E+02	-	3.9131E+04	3.1865E+05	-	5.5767E+03	6.9127E+03
2.8219E+02	1.2623E+03	3.4656E+02	-	3.2609E+04	8.1731E+05	-	5.1120E+03	1.7060E+04
2.8219E+02	1.2097E+03	1.0195E+03	-	2.6088E+04	1.8679E+06	-	4.6473E+03	1.6264E+04
2.8219E+02	1.1571E+03	3.0216E+02	-	1.9566E+04	3.2678E+06	-	4.1825E+03	4.5894E+04
2.8219E+02	1.1045E+03	8.5042E+02	-	1.3044E+04	5.4196E+06	-	3.7178E+03	8.8500E+04
2.8219E+02	1.0519E+03	1.2228E+03	-	6.5219E+03	8.7280E+06	-	3.2531E+03	1.5472E+05
2.8219E+02	9.9934E+02	2.0877E+03	-	0.0000E+00	1.1690E+07	-	2.7884E+03	1.9955E+05
2.8219E+02	9.4675E+02	1.5543E+03	-	2.5435E+05	3.3392E+00	-	2.3236E+03	2.6465E+05
2.8219E+02	8.9415E+02	3.4453E+03	-	2.4783E+05	6.5105E+00	-	1.8589E+03	3.1679E+05
2.8219E+02	8.4155E+02	4.3120E+03	-	2.4131E+05	1.0475E+01	-	1.3942E+03	3.1001E+05
2.8219E+02	7.8896E+02	7.5466E+03	-	2.3479E+05	1.6696E+00	-	9.2946E+02	4.5620E+05
2.8219E+02	7.3636E+02	9.2517E+03	-	2.2827E+05	1.7361E+00	-	4.6473E+02	1.1511E+06
2.8219E+02	6.8376E+02	1.7969E+04	-	2.2174E+05	8.2605E+00	-	0.0000E+00	2.9890E+06
2.8219E+02	6.3116E+02	6.8076E+04	-	2.1522E+05	8.8795E+00	-	2.3236E+03	0.0000E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.8219E+02	5.7857E+02	9.4112E+04	-	2.0870E+05	1.0403E+01	-	1.5801E+04	6.2500E-01
2.8219E+02	5.2597E+02	1.9213E+05	-	2.0218E+05	2.2489E+01	-	1.3942E+04	1.3021E+00
2.8219E+02	4.7337E+02	3.4337E+05	-	1.9566E+05	1.7304E+00	-	1.3477E+04	2.5665E+00
2.8219E+02	4.2078E+02	8.0805E+05	-	1.8913E+05	2.0714E+01	-	1.2083E+04	6.6460E-02
2.8219E+02	3.6818E+02	1.4073E+06	-	1.8261E+05	1.0072E+01	-	1.1618E+04	3.0682E-01
2.8219E+02	3.1558E+02	2.2659E+06	-	1.7609E+05	2.3596E+01	-	1.0689E+04	1.7361E+00
2.8219E+02	2.6299E+02	3.8123E+06	-	1.6957E+05	4.5972E+00	-	1.0224E+04	1.6696E+00
2.8219E+02	2.1039E+02	5.8321E+06	-	1.6305E+05	8.2715E+00	-	8.3651E+03	1.1944E-01
2.8219E+02	1.5779E+02	7.2586E+06	-	1.5653E+05	2.1835E+00	-	7.9004E+03	6.5214E-01
2.8219E+02	1.0519E+02	8.6792E+06	-	1.5000E+05	2.1315E+00	-	7.4356E+03	1.1962E+01
2.8219E+02	5.2597E+01	1.1236E+07	-	1.4348E+05	1.3441E+02	-	6.9709E+03	2.6329E+00
2.8219E+02	0.0000E+00	3.5283E+07	-	1.3696E+05	1.0437E+02	-	6.5062E+03	3.4640E+01
2.1995E+02	2.5247E+03	1.6696E+00	-	1.3044E+05	7.2259E+02	-	6.0415E+03	2.4440E+01
2.1995E+02	2.4721E+03	1.6696E+00	-	1.2392E+05	5.1866E+01	-	5.5767E+03	1.7504E+01
2.1995E+02	2.4195E+03	8.9825E+00	-	1.1739E+05	6.3581E+01	-	5.1120E+03	4.0609E+02
2.1995E+02	2.3669E+03	3.4196E+00	-	1.1087E+05	7.9417E+02	-	4.6473E+03	5.2851E+03
2.1995E+02	2.3143E+03	5.0892E+00	-	1.0435E+05	1.0383E+04	-	4.1825E+03	1.8354E+03
2.1995E+02	2.2617E+03	1.1600E+01	-	9.7828E+04	4.0483E+03	-	3.7178E+03	5.0835E+03
2.1995E+02	2.2091E+03	1.1666E+01	-	9.1306E+04	1.5851E+04	-	3.2531E+03	1.3804E+04
2.1995E+02	2.1565E+03	6.5105E+00	-	8.4784E+04	1.0448E+04	-	2.7884E+03	3.5903E+04
2.1995E+02	2.1039E+03	8.5892E+00	-	7.8263E+04	2.8879E+04	-	2.3236E+03	5.4176E+04
2.1995E+02	2.0513E+03	1.5644E+01	-	7.1741E+04	2.4785E+04	-	1.8589E+03	6.8912E+04
2.1995E+02	1.9987E+03	1.5086E+01	-	6.5219E+04	2.4313E+04	-	1.3942E+03	9.0181E+04
2.1995E+02	1.9461E+03	5.8750E+00	-	5.8697E+04	3.1568E+04	-	9.2946E+02	1.8605E+05
2.1995E+02	1.8935E+03	1.2896E+01	-	5.2175E+04	5.4100E+04	-	4.6473E+02	4.4663E+05
2.1995E+02	1.8409E+03	2.0681E+01	-	4.5653E+04	1.1452E+05	-	0.0000E+00	1.3955E+06
2.1995E+02	1.7883E+03	1.5399E+01	-	3.9131E+04	3.0453E+05	-	1.4871E+04	0.0000E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.1995E+02	1.7357E+03	3.8776E+00	-	3.2609E+04	8.0243E+05	-	1.4407E+04	6.2500E-01
2.1995E+02	1.6831E+03	4.7966E+01	-	2.6088E+04	1.8335E+06	-	1.3942E+04	1.5341E-01
2.1995E+02	1.6305E+03	3.1663E+00	-	1.9566E+04	3.9249E+06	-	1.2548E+04	6.6460E-02
2.1995E+02	1.5779E+03	4.2974E+01	-	1.3044E+04	6.1542E+06	-	1.1618E+04	1.6696E+00
2.1995E+02	1.5253E+03	1.0566E+00	-	6.5219E+03	9.9925E+06	-	1.1153E+04	1.3292E-01
2.1995E+02	1.4727E+03	3.8828E+01	-	0.0000E+00	1.3607E+07	-	8.8298E+03	1.3292E-01
2.1995E+02	1.4201E+03	4.4997E+01	-	2.6740E+05	1.6696E+00	-	8.3651E+03	2.0901E+02
2.1995E+02	1.3675E+03	5.5661E+01	-	2.6088E+05	1.6696E+00	-	7.4356E+03	5.9719E-02
2.1995E+02	1.3149E+03	2.1793E+01	-	2.5435E+05	1.6696E+00	-	6.9709E+03	3.7148E+00
2.1995E+02	1.2623E+03	1.0857E+02	-	2.4783E+05	5.0088E+00	-	6.5062E+03	3.8336E+00
2.1995E+02	1.2097E+03	9.5667E+01	-	2.4131E+05	6.7588E+00	-	6.0415E+03	4.7574E+00
2.1995E+02	1.1571E+03	2.5397E+02	-	2.3479E+05	3.3392E+00	-	5.5767E+03	2.1526E+02
2.1995E+02	1.1045E+03	4.1692E+02	-	2.2827E+05	1.0906E+01	-	5.1120E+03	2.4127E+02
2.1995E+02	1.0519E+03	2.6141E+02	-	2.2174E+05	1.2033E+00	-	4.6473E+03	1.6057E+01
2.1995E+02	9.9934E+02	4.0432E+02	-	2.1522E+05	1.0778E+01	-	4.1825E+03	3.4071E+01
2.1995E+02	9.4675E+02	9.2814E+02	-	2.0870E+05	4.0822E+00	-	3.7178E+03	1.9229E+02
2.1995E+02	8.9415E+02	1.1773E+03	-	2.0218E+05	1.7361E+00	-	3.2531E+03	4.1796E+01
2.1995E+02	8.4155E+02	2.8340E+03	-	1.9566E+05	2.7108E+01	-	2.7884E+03	2.4498E+02
2.1995E+02	7.8896E+02	2.0580E+03	-	1.8913E+05	7.9823E+00	-	2.3236E+03	1.0972E+03
2.1995E+02	7.3636E+02	3.9285E+03	-	1.8261E+05	2.5895E+01	-	1.8589E+03	4.4087E+03
2.1995E+02	6.8376E+02	9.6098E+03	-	1.7609E+05	5.8492E+00	-	1.3942E+03	1.5480E+04
2.1995E+02	6.3116E+02	3.8527E+04	-	1.6957E+05	1.1141E+01	-	9.2946E+02	4.7198E+04
2.1995E+02	5.7857E+02	4.7417E+04	-	1.6305E+05	4.3478E+01	-	4.6473E+02	1.0975E+05
2.1995E+02	5.2597E+02	1.2157E+05	-	1.5653E+05	3.7965E+01	-	0.0000E+00	4.0828E+05
2.1995E+02	4.7337E+02	1.8888E+05	-	1.5000E+05	4.2646E+00	-	2.1842E+04	6.6460E-02
2.1995E+02	4.2078E+02	4.2352E+05	-	1.4348E+05	3.5026E+02	-	1.5801E+04	6.6460E-02
2.1995E+02	3.6818E+02	8.3816E+05	-	1.3696E+05	3.1777E+02	-	7.4356E+05	1.0109E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.1995E+02	3.1558E+02	1.8116E+06	-	1.3044E+05	4.1812E+02	-	6.9709E+03	6.5214E-01
2.1995E+02	2.6299E+02	3.4789E+06	-	1.2392E+05	7.7286E+02	-	6.5062E+03	1.0410E+00
2.1995E+02	2.1039E+02	6.6918E+06	-	1.1739E+05	7.2888E+03	-	6.0415E+03	3.3161E+00
2.1995E+02	1.5779E+02	9.7653E+06	-	1.1087E+05	4.3880E+03	-	5.5767E+03	6.0423E+00
2.1995E+02	1.0519E+02	1.3189E+07	-	1.0435E+05	1.6252E+03	-	5.1120E+03	5.1931E+00
2.1995E+02	5.2597E+01	1.8040E+07	-	9.7828E+04	1.8358E+03	-	4.6473E+03	2.0710E+00
2.1995E+02	0.0000E+00	4.7588E+07	-	9.1306E+04	1.2279E+04	-	4.1825E+03	2.2608E+02
1.5771E+02	2.4195E+03	3.4057E+00	-	8.4784E+04	1.3717E+04	-	3.7178E+03	4.3077E+02
1.5771E+02	2.3669E+03	1.6696E+00	-	7.8263E+04	2.6791E+04	-	3.2531E+03	4.5848E-01
1.5771E+02	2.3143E+03	6.6460E-02	-	7.1741E+04	2.8144E+04	-	2.7884E+03	8.0838E+00
1.5771E+02	2.2617E+03	1.6696E+00	-	6.5219E+04	2.9409E+04	-	2.3236E+03	1.7524E+03
1.5771E+02	2.2091E+03	1.4691E+01	-	5.8697E+04	3.8693E+04	-	1.8589E+03	1.4809E+03
1.5771E+02	2.1565E+03	1.6696E+00	-	5.2175E+04	3.8315E+04	-	1.3942E+03	3.6130E+03
1.5771E+02	2.1039E+03	5.3829E+00	-	4.5653E+04	6.3308E+04	-	9.2946E+02	4.7345E+02
1.5771E+02	2.0513E+03	1.7500E+00	-	3.9131E+04	1.9797E+05	-	4.6473E+02	4.6282E+04
1.5771E+02	1.9987E+03	1.7500E+00	-	3.2609E+04	4.1313E+05	-	0.0000E+00	1.1549E+05
1.5771E+02	1.9461E+03	4.1250E+00	-	2.6088E+04	1.4609E+06	-	2.0448E+04	6.6460E-02
1.5771E+02	1.8935E+03	2.0158E+00	-	1.9566E+04	2.8494E+06	-	1.6730E+04	6.6460E-02
1.5771E+02	1.8409E+03	9.5730E-01	-	1.3044E+04	5.3859E+06	-	1.5801E+04	1.3292E-01
1.5771E+02	1.7883E+03	1.3220E+01	-	6.5219E+03	8.0265E+06	-	1.0224E+04	1.3292E-01
1.5771E+02	1.7357E+03	2.0065E+01	-	0.0000E+00	1.4623E+07	-	7.4356E+03	9.6530E+00
1.5771E+02	1.6831E+03	1.3154E+01	-	2.3479E+05	1.6696E+00	-	6.5062E+03	5.9719E-02
1.5771E+02	1.6305E+03	3.6364E+01	-	2.1522E+05	1.6696E+00	-	6.0415E+03	7.8506E-01
1.5771E+02	1.5779E+03	2.0773E+00	-	2.0218E+05	6.5303E+00	-	5.5767E+03	3.8883E-01
1.5771E+02	1.5253E+03	2.7431E+01	-	1.9566E+05	1.7420E+01	-	5.1120E+03	1.3640E+00
1.5771E+02	1.4727E+03	7.2432E-01	-	1.8913E+05	2.7031E+01	-	4.6473E+03	9.7661E+00
1.5771E+02	1.4201E+03	4.3033E+01	-	1.8261E+05	1.9781E+01	-	4.1825E+03	5.1927E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.5771E+02	1.3675E+03	8.2303E+01	-	1.7609E+05	2.2530E+01	-	3.7178E+03	1.6769E+00
1.5771E+02	1.3149E+03	4.2669E+01	-	1.6957E+05	3.1180E+01	-	3.2531E+03	1.1224E+01
1.5771E+02	1.2623E+03	9.6797E+01	-	1.6305E+05	8.8395E-01	-	2.7884E+03	4.3789E+00
1.5771E+02	1.2097E+03	1.0955E+02	-	1.5653E+05	4.1692E+01	-	2.3236E+03	1.4629E+01
1.5771E+02	1.1571E+03	1.6364E+02	-	1.5000E+05	2.5002E+01	-	1.8589E+03	1.4197E+01
1.5771E+02	1.1045E+03	2.5624E+02	-	1.4348E+05	3.4042E+02	-	1.3942E+03	6.8931E+01
1.5771E+02	1.0519E+03	2.4402E+02	-	1.3696E+05	1.1877E+02	-	9.2946E+02	2.2262E+02
1.5771E+02	9.9934E+02	2.0398E+02	-	1.3044E+05	4.1281E+01	-	4.6473E+02	8.8041E+03
1.5771E+02	9.4675E+02	1.4554E+03	-	1.2392E+05	4.4688E+02	-	0.0000E+00	1.7194E+04
1.5771E+02	8.9415E+02	8.0501E+02	-	1.1739E+05	3.5240E+03	-	1.8124E+04	6.6460E-02
1.5771E+02	8.4155E+02	3.0444E+03	-	1.1087E+05	9.3680E+03	-	1.7660E+04	6.6460E-02
1.5771E+02	7.8896E+02	5.3188E+03	-	1.0435E+05	1.7408E+03	-	6.0415E+03	4.3974E-01
1.5771E+02	7.3636E+02	1.1744E+04	-	9.7828E+04	1.6145E+04	-	5.5767E+03	4.3057E+00
1.5771E+02	6.8376E+02	2.2295E+04	-	9.1306E+04	1.5057E+04	-	5.1120E+03	1.3292E-01
1.5771E+02	6.3116E+02	1.9090E+04	-	8.4784E+04	1.4201E+04	-	4.6473E+03	1.9264E-01
1.5771E+02	5.7857E+02	3.9704E+04	-	7.8263E+04	1.9335E+04	-	4.1825E+03	7.7158E-01
1.5771E+02	5.2597E+02	1.1113E+05	-	7.1741E+04	2.1471E+04	-	2.7884E+03	4.6348E+00
1.5771E+02	4.7337E+02	1.5430E+05	-	6.5219E+04	2.5959E+04	-	2.3236E+03	4.9579E+00
1.5771E+02	4.2078E+02	4.3315E+05	-	5.8697E+04	4.8479E+04	-	1.8589E+03	4.1567E+00
1.5771E+02	3.6818E+02	9.1523E+05	-	5.2175E+04	4.8368E+04	-	1.3942E+03	6.7080E+00
1.5771E+02	3.1558E+02	1.9043E+06	-	4.5653E+04	1.1467E+05	-	9.2946E+02	2.2430E+02
1.5771E+02	2.6299E+02	3.9699E+06	-	3.9131E+04	1.3096E+05	-	4.6473E+02	5.7502E+02
1.5771E+02	2.1039E+02	7.9509E+06	-	3.2609E+04	4.4562E+05	-	0.0000E+00	2.7832E+03
1.5771E+02	1.5779E+02	1.3920E+07	-	2.6088E+04	1.1492E+06	-	6.0415E+03	1.3292E-01
1.5771E+02	1.0519E+02	1.8498E+07	-	1.9566E+04	3.0637E+06	-	5.5767E+03	1.3292E-01
1.5771E+02	5.2597E+01	2.3819E+07	-	1.3044E+04	4.9264E+06	-	4.6473E+03	5.9719E-02
1.5771E+02	0.0000E+00	5.6812E+07	-	6.5219E+03	7.7809E+06	-	4.1825E+05	5.9719E-02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.5476E+01	2.3669E+03	3.5000E+00	-	0.0000E+00	1.9140E+07	-	3.7178E+03	3.8883E-01
9.5476E+01	2.2617E+03	1.6696E+00	-	2.3479E+05	1.6696E+00	-	2.7884E+03	1.6989E+00
9.5476E+01	2.2091E+03	6.6460E-02	-	2.0870E+05	2.7255E+00	-	2.3236E+03	4.3057E+00
9.5476E+01	2.1565E+03	1.6696E+00	-	1.7609E+05	1.3268E+01	-	1.8589E+03	1.1307E+01
9.5476E+01	2.1039E+03	1.8165E+00	-	1.6957E+05	2.8938E+01	-	1.3942E+03	9.4133E+00
9.5476E+01	2.0513E+03	1.3292E-01	-	1.6305E+05	3.0439E+00	-	9.2946E+02	6.5499E+00
9.5476E+01	1.9987E+03	7.5792E-01	-	1.5653E+05	2.1135E+02	-	4.6473E+02	1.8493E+01
9.5476E+01	1.9461E+03	1.7500E+00	-	1.5000E+05	2.5894E+02	-	0.0000E+00	2.0620E+03
9.5476E+01	1.7883E+03	1.8248E+01	-	1.4348E+05	4.8172E+01	-	7.9004E+03	1.3292E-01
9.5476E+01	1.7357E+03	1.7832E+01	-	1.3696E+05	6.3564E+01	-	6.0415E+03	1.3292E-01
9.5476E+01	1.6831E+03	2.3481E+00	-	1.3044E+05	6.3814E+02	-	5.1120E+03	3.3392E+00
9.5476E+01	1.6305E+03	1.8115E+01	-	1.2392E+05	3.4204E+03	-	4.1825E+03	6.5214E-01
9.5476E+01	1.5253E+03	2.6241E+01	-	1.1739E+05	8.7286E+02	-	3.7178E+03	5.9719E-02
9.5476E+01	1.4727E+03	2.3296E+00	-	1.1087E+05	1.0730E+03	-	2.7884E+03	7.1186E-01
9.5476E+01	1.4201E+03	2.6441E+01	-	1.0435E+05	3.4359E+03	-	1.8589E+03	4.2460E+00
9.5476E+01	1.3675E+03	5.3041E+01	-	9.7828E+04	1.1984E+04	-	1.3942E+03	3.8883E-01
9.5476E+01	1.3149E+03	5.3205E+01	-	9.1306E+04	6.7124E+03	-	9.2946E+02	7.3913E+00
9.5476E+01	1.2623E+03	6.5863E+01	-	8.4784E+04	9.6306E+03	-	4.6473E+02	1.2801E+01
9.5476E+01	1.2097E+03	1.2491E+02	-	7.8263E+04	4.6631E+04	-	0.0000E+00	2.6035E+02
9.5476E+01	1.1571E+03	3.0035E+01	-	7.1741E+04	4.0569E+04	-	9.2946E+03	1.3292E-01
9.5476E+01	1.1045E+03	7.7193E+01	-	6.5219E+04	6.6168E+04	-	6.9709E+03	1.3292E-01
9.5476E+01	1.0519E+03	1.2885E+02	-	5.8697E+04	1.1984E+05	-	4.6473E+03	2.6584E-01
9.5476E+01	9.9934E+02	1.1374E+02	-	5.2175E+04	1.3062E+05	-	3.7178E+03	1.2500E+00
9.5476E+01	9.4675E+02	2.5118E+02	-	4.5653E+04	2.5186E+05	-	3.2531E+03	5.0000E+00
9.5476E+01	8.9415E+02	3.1609E+02	-	3.9131E+04	3.3700E+05	-	1.8589E+03	1.3292E-01
9.5476E+01	8.4155E+02	4.3498E+02	-	3.2609E+04	6.9080E+05	-	1.3942E+03	1.4430E+00
9.5476E+01	7.8896E+02	1.4404E+03	-	2.6088E+04	1.3819E+06	-	9.2946E+02	1.3292E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
9.5476E+01	7.3636E+02	6.2016E+03	- 7.9759E+04	1.9566E+04	3.6261E+06	- 8.5248E+03	4.6473E+02	1.6224E+00
9.5476E+01	6.8376E+02	6.1759E+03	- 7.9759E+04	1.3044E+04	5.3663E+06	- 8.5248E+03	0.0000E+00	2.6609E+01
9.5476E+01	6.3116E+02	1.5485E+04	- 7.9759E+04	6.5219E+03	6.3938E+06	- 9.0749E+03	0.0000E+00	1.5365E+01
9.5476E+01	5.7857E+02	2.1849E+04	- 7.9759E+04	0.0000E+00	1.8358E+07	- 9.6250E+03	2.3236E+03	1.3292E-01
9.5476E+01	5.2597E+02	4.4271E+04	- 8.7330E+04	1.7609E+05	4.2732E+02	- 9.6250E+03	0.0000E+00	1.1944E-01
9.5476E+01	4.7337E+02	1.3580E+05	- 8.7330E+04	1.6957E+05	3.0439E+00	- 1.0175E+04	0.0000E+00	1.9264E-01
9.5476E+01	4.2078E+02	2.7619E+05	- 8.7330E+04	1.6305E+05	3.3239E+01			
9.5476E+01	3.6818E+02	5.9937E+05	- 8.7330E+04	1.5653E+05	2.4367E+01			
9.5476E+01	3.1558E+02	1.1125E+06	- 8.7330E+04	1.5000E+05	7.2834E+01			
9.5476E+01	2.6299E+02	2.1312E+06	- 8.7330E+04	1.4348E+05	3.8505E+02			
9.5476E+01	2.1039E+02	3.1427E+06	- 8.7330E+04	1.3696E+05	3.1231E+02			
9.5476E+01	1.5779E+02	4.7792E+06	- 8.7330E+04	1.3044E+05	2.9646E+03			
9.5476E+01	1.0519E+02	7.1663E+06	- 8.7330E+04	1.2392E+05	9.3258E+02			
9.5476E+01	5.2597E+01	1.0981E+07	- 8.7330E+04	1.1739E+05	3.7150E+03			
9.5476E+01	0.0000E+00	3.4986E+07	- 8.7330E+04	1.1087E+05	3.7930E+03			
3.3237E+01	2.6299E+03	6.2500E-01	- 8.7330E+04	1.0435E+05	5.3691E+03			
3.3237E+01	2.3143E+03	3.3392E+00	- 8.7330E+04	9.7828E+04	1.3713E+04			
3.3237E+01	2.2617E+03	1.8165E+00	- 8.7330E+04	9.1306E+04	1.2695E+04			
3.3237E+01	2.2091E+03	1.6696E+00	- 8.7330E+04	8.4784E+04	2.6239E+04			
3.3237E+01	2.1565E+03	1.7500E+00	- 8.7330E+04	7.8263E+04	7.0370E+04			
3.3237E+01	2.1039E+03	1.3292E-01	- 8.7330E+04	7.1741E+04	7.9930E+04			
3.3237E+01	2.0513E+03	8.9160E+00	- 8.7330E+04	6.5219E+04	1.8522E+05			
3.3237E+01	1.9461E+03	6.6460E-02	- 8.7330E+04	5.8697E+04	2.6826E+05			
3.3237E+01	1.8935E+03	6.6460E-02	- 8.7330E+04	5.2175E+04	3.6088E+05			
3.3237E+01	1.7883E+03	6.6460E-02	- 8.7330E+04	4.5653E+04	5.4999E+05			
3.3237E+01	1.6831E+03	1.9938E-01	- 8.7330E+04	3.9131E+04	9.2817E+05			
3.3237E+01	1.6305E+03	5.2710E-01	- 8.7330E+04	3.2609E+04	1.1162E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.3237E+01	1.5779E+03	1.3292E-01	- 8.7330E+04	2.6088E+04	1.6440E+06			
3.3237E+01	1.5253E+03	1.6028E+00	- 8.7330E+04	1.9566E+04	3.0275E+06			
3.3237E+01	1.4727E+03	2.6584E-01	- 8.7330E+04	1.3044E+04	3.7705E+06			
3.3237E+01	1.4201E+03	3.2519E+00	- 8.7330E+04	6.5219E+03	4.6014E+06			
3.3237E+01	1.3675E+03	5.4298E+00	- 8.7330E+04	0.0000E+00	1.4126E+07			
3.3237E+01	1.3149E+03	1.9039E+01	- 9.4901E+04	1.6957E+05	3.0439E+00			
3.3237E+01	1.2623E+03	9.6628E+00	- 9.4901E+04	1.6305E+05	3.0439E+00			
3.3237E+01	1.2097E+03	4.4499E+00	- 9.4901E+04	1.5653E+05	2.8525E+03			
3.3237E+01	1.1571E+03	2.0902E+01	- 9.4901E+04	1.5000E+05	2.0862E+03			
3.3237E+01	1.1045E+03	1.3838E+01	- 9.4901E+04	1.4348E+05	2.2416E+02			
3.3237E+01	1.0519E+03	1.2950E+01	- 9.4901E+04	1.3696E+05	3.3494E+02			
3.3237E+01	9.9934E+02	2.6537E+01	- 9.4901E+04	1.3044E+05	1.1144E+03			
3.3237E+01	9.4675E+02	1.8387E+01	- 9.4901E+04	1.2392E+05	1.5177E+03			
3.3237E+01	8.9415E+02	8.9994E+01	- 9.4901E+04	1.1739E+05	6.3107E+03			
3.3237E+01	8.4155E+02	3.9293E+01	- 9.4901E+04	1.1087E+05	5.4932E+03			
3.3237E+01	7.8896E+02	3.7405E+01	- 9.4901E+04	1.0435E+05	1.7286E+04			
3.3237E+01	7.3636E+02	8.6510E+03	- 9.4901E+04	9.7828E+04	2.2116E+04			
3.3237E+01	6.8376E+02	2.4562E+04	- 9.4901E+04	9.1306E+04	3.4940E+04			
3.3237E+01	6.3116E+02	4.9639E+04	- 9.4901E+04	8.4784E+04	5.6756E+04			
3.3237E+01	5.7857E+02	1.1512E+05	- 9.4901E+04	7.8263E+04	8.4464E+04			
3.3237E+01	5.2597E+02	1.0315E+05	- 9.4901E+04	7.1741E+04	1.4453E+05			
3.3237E+01	4.7337E+02	8.6590E+04	- 9.4901E+04	6.5219E+04	2.9200E+05			
3.3237E+01	4.2078E+02	8.4278E+04	- 9.4901E+04	5.8697E+04	4.3976E+05			
3.3237E+01	3.6818E+02	2.7309E+05	- 9.4901E+04	5.2175E+04	7.1635E+05			
3.3237E+01	3.1558E+02	4.4002E+05	- 9.4901E+04	4.5653E+04	1.0925E+06			
3.3237E+01	2.6299E+02	9.6637E+05	- 9.4901E+04	3.9131E+04	1.5686E+06			
3.3237E+01	2.1039E+02	1.7720E+06	- 9.4901E+04	3.2609E+04	2.3045E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.3237E+01	1.5779E+02	3.2084E+06	-	2.6088E+04	3.0204E+06			
3.3237E+01	1.0519E+02	5.6959E+06	-	1.9566E+04	3.7963E+06			
3.3237E+01	5.2597E+01	1.2915E+07	-	1.3044E+04	3.8066E+06			
3.3237E+01	0.0000E+00	3.4192E+07	-	6.5219E+03	3.5601E+06			
-	2.4721E+03	1.6696E+00	-	0.0000E+00	1.1124E+07			
-	1.9461E+03	6.6460E-02	-	1.5653E+05	2.5041E+02			
-	1.7883E+03	6.6460E-02	-	1.5000E+05	2.7429E+02			
-	1.7357E+03	6.6460E-02	-	1.4348E+05	8.8932E+02			
-	1.5253E+03	6.9146E-01	-	1.3696E+05	3.6611E+03			
-	1.4727E+03	6.6460E-02	-	1.3044E+05	2.0262E+03			
-	1.4201E+03	2.3750E+00	-	1.2392E+05	7.3160E+03			
-	1.3675E+03	6.6460E-02	-	1.1739E+05	1.9925E+04			
-	1.3149E+03	1.8025E+00	-	1.1087E+05	1.1674E+04			
-	1.2623E+03	6.5551E+00	-	1.0435E+05	1.0975E+04			
-	1.2097E+03	8.2253E+00	-	9.7828E+04	2.9707E+04			
-	1.1571E+03	5.1139E+00	-	9.1306E+04	4.8347E+04			
-	1.1045E+03	8.1772E+00	-	8.4784E+04	1.1866E+05			
-	1.0519E+03	2.9380E+01	-	7.8263E+04	1.5875E+05			
-	9.9934E+02	1.7678E+01	-	7.1741E+04	2.5737E+05			
-	9.4675E+02	2.5930E+01	-	6.5219E+04	3.4950E+05			
-	8.9415E+02	6.7081E+01	-	5.8697E+04	6.3136E+05			
-	8.4155E+02	6.8122E+01	-	5.2175E+04	1.1586E+06			
-	7.8896E+02	2.2174E+04	-	4.5653E+04	1.9164E+06			
-	7.3636E+02	2.9600E+04	-	3.9131E+04	2.5602E+06			
-	6.8376E+02	2.9540E+04	-	3.2609E+04	3.4661E+06			
-	6.3116E+02	3.6983E+04	-	2.6088E+04	4.6475E+06			
-	5.7857E+02	5.3903E+04	-	1.9566E+04	4.7250E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.9002E+01	5.2597E+02	5.2118E+04	1.0247E+05	1.3044E+04	4.8574E+06			
-			-					
2.9002E+01	4.7337E+02	1.0562E+05	1.0247E+05	6.5219E+03	4.4969E+06			
-			-					
2.9002E+01	4.2078E+02	1.4968E+05	1.0247E+05	0.0000E+00	1.2108E+07			
-			-					
2.9002E+01	3.6818E+02	1.7119E+05	1.1004E+05	1.6305E+05	1.7691E+02			
-			-					
2.9002E+01	3.1558E+02	1.4775E+05	1.1004E+05	1.5653E+05	4.7750E+01			
-			-					
2.9002E+01	2.6299E+02	2.8719E+05	1.1004E+05	1.5000E+05	2.7429E+02			
-			-					
2.9002E+01	2.1039E+02	8.1275E+05	1.1004E+05	1.4348E+05	7.0160E+02			
-			-					
2.9002E+01	1.5779E+02	2.0388E+06	1.1004E+05	1.3696E+05	1.6221E+03			
-			-					
2.9002E+01	1.0519E+02	4.1021E+06	1.1004E+05	1.3044E+05	1.0303E+04			
-			-					
2.9002E+01	5.2597E+01	9.5036E+06	1.1004E+05	1.2392E+05	7.2312E+03			
-			-					
2.9002E+01	0.0000E+00	2.1890E+07	1.1004E+05	1.1739E+05	1.8183E+04			
-			-					
9.1241E+01	1.9987E+03	1.7500E+00	1.1004E+05	1.1087E+05	2.0885E+04			
-			-					
9.1241E+01	1.7883E+03	6.6460E-02	1.1004E+05	1.0435E+05	4.1116E+04			
-			-					
9.1241E+01	1.6305E+03	1.7500E+00	1.1004E+05	9.7828E+04	6.1386E+04			
-			-					
9.1241E+01	1.5779E+03	1.8165E+00	1.1004E+05	9.1306E+04	6.9992E+04			
-			-					
9.1241E+01	1.4727E+03	1.9938E-01	1.1004E+05	8.4784E+04	1.3392E+05			
-			-					
9.1241E+01	1.4201E+03	3.3392E+00	1.1004E+05	7.8263E+04	1.6821E+05			
-			-					
9.1241E+01	1.3675E+03	2.7073E+00	1.1004E+05	7.1741E+04	3.6095E+05			
-			-					
9.1241E+01	1.3149E+03	4.1250E+00	1.1004E+05	6.5219E+04	4.4464E+05			
-			-					
9.1241E+01	1.2623E+03	6.4196E+00	1.1004E+05	5.8697E+04	8.1187E+05			
-			-					
9.1241E+01	1.2097E+03	7.6250E+00	1.1004E+05	5.2175E+04	1.4402E+06			
-			-					
9.1241E+01	1.1571E+03	3.4411E+01	1.1004E+05	4.5653E+04	2.1582E+06			
-			-					
9.1241E+01	1.1045E+03	9.2946E+00	1.1004E+05	3.9131E+04	3.3958E+06			
-			-					
9.1241E+01	1.0519E+03	2.7176E+01	1.1004E+05	3.2609E+04	4.5405E+06			
-			-					
9.1241E+01	9.9934E+02	2.9322E+01	1.1004E+05	2.6088E+04	5.6747E+06			
-			-					
9.1241E+01	9.4675E+02	6.6424E+01	1.1004E+05	1.9566E+04	6.0829E+06			
-			-					
9.1241E+01	8.9415E+02	2.7500E+01	1.1004E+05	1.3044E+04	5.4899E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
9.1241E+01	8.4155E+02	3.0468E+01	1.1004E+05	6.5219E+03	4.3773E+06			
-			-					
9.1241E+01	7.8896E+02	7.9425E+01	1.1004E+05	0.0000E+00	1.2912E+07			
-			-					
9.1241E+01	7.3636E+02	1.4258E+02	1.1761E+05	1.7609E+05	2.3875E+01			
-			-					
9.1241E+01	6.8376E+02	1.0841E+02	1.1761E+05	1.6957E+05	2.3875E+01			
-			-					
9.1241E+01	6.3116E+02	1.5322E+02	1.1761E+05	1.5653E+05	2.8459E+02			
-			-					
9.1241E+01	5.7857E+02	2.0072E+02	1.1761E+05	1.5000E+05	2.6071E+02			
-			-					
9.1241E+01	5.2597E+02	1.6104E+02	1.1761E+05	1.4348E+05	8.3487E+02			
-			-					
9.1241E+01	4.7337E+02	4.0254E+02	1.1761E+05	1.3696E+05	1.2755E+03			
-			-					
9.1241E+01	4.2078E+02	4.7742E+03	1.1761E+05	1.3044E+05	1.0735E+04			
-			-					
9.1241E+01	3.6818E+02	7.8911E+03	1.1761E+05	1.2392E+05	1.2332E+04			
-			-					
9.1241E+01	3.1558E+02	9.3413E+03	1.1761E+05	1.1739E+05	6.8133E+03			
-			-					
9.1241E+01	2.6299E+02	1.4299E+04	1.1761E+05	1.1087E+05	3.6670E+04			
-			-					
9.1241E+01	2.1039E+02	1.4726E+04	1.1761E+05	1.0435E+05	3.7485E+04			
-			-					
9.1241E+01	1.5779E+02	1.2170E+05	1.1761E+05	9.7828E+04	7.2043E+04			
-			-					
9.1241E+01	1.0519E+02	2.5672E+05	1.1761E+05	9.1306E+04	6.0135E+04			
-			-					
9.1241E+01	5.2597E+01	9.3920E+05	1.1761E+05	8.4784E+04	1.5804E+05			
-			-					
9.1241E+01	0.0000E+00	3.1778E+06	1.1761E+05	7.8263E+04	2.2452E+05			
-			-					
1.5348E+02	1.7883E+03	6.6460E-02	1.1761E+05	7.1741E+04	3.3153E+05			
-			-					
1.5348E+02	1.5253E+03	6.7588E+00	1.1761E+05	6.5219E+04	4.9452E+05			
-			-					
1.5348E+02	1.3675E+03	8.8165E+00	1.1761E+05	5.8697E+04	8.5781E+05			
-			-					
1.5348E+02	1.3149E+03	1.9925E+01	1.1761E+05	5.2175E+04	1.4654E+06			
-			-					
1.5348E+02	1.2623E+03	6.3392E+00	1.1761E+05	4.5653E+04	2.3416E+06			
-			-					
1.5348E+02	1.2097E+03	1.4152E+01	1.1761E+05	3.9131E+04	3.8969E+06			
-			-					
1.5348E+02	1.1571E+03	3.5000E+00	1.1761E+05	3.2609E+04	5.1585E+06			
-			-					
1.5348E+02	1.1045E+03	3.5665E+00	1.1761E+05	2.6088E+04	6.5549E+06			
-			-					
1.5348E+02	1.0519E+03	8.8829E+00	1.1761E+05	1.9566E+04	6.7111E+06			
-			-					
1.5348E+02	9.9934E+02	1.8561E+01	1.1761E+05	1.3044E+04	6.2768E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
1.5348E+02	9.4675E+02	3.1252E+01	1.1761E+05	6.5219E+03	5.4755E+06			
-			-					
1.5348E+02	8.9415E+02	4.6647E+01	1.1761E+05	0.0000E+00	1.6727E+07			
-			-					
1.5348E+02	8.4155E+02	4.1339E+01	1.2518E+05	1.5653E+05	2.3875E+01			
-			-					
1.5348E+02	7.8896E+02	4.5341E+01	1.2518E+05	1.4348E+05	5.9985E+02			
-			-					
1.5348E+02	7.3636E+02	9.1402E+01	1.2518E+05	1.3696E+05	3.6887E+02			
-			-					
1.5348E+02	6.8376E+02	4.0731E+01	1.2518E+05	1.3044E+05	1.5462E+03			
-			-					
1.5348E+02	6.3116E+02	6.2068E+01	1.2518E+05	1.2392E+05	1.0273E+04			
-			-					
1.5348E+02	5.7857E+02	1.0150E+02	1.2518E+05	1.1739E+05	8.1923E+03			
-			-					
1.5348E+02	5.2597E+02	2.1163E+02	1.2518E+05	1.1087E+05	2.1402E+04			
-			-					
1.5348E+02	4.7337E+02	1.9286E+02	1.2518E+05	1.0435E+05	4.9940E+04			
-			-					
1.5348E+02	4.2078E+02	1.2644E+02	1.2518E+05	9.7828E+04	9.4836E+04			
-			-					
1.5348E+02	3.6818E+02	2.2794E+03	1.2518E+05	9.1306E+04	7.9519E+04			
-			-					
1.5348E+02	3.1558E+02	3.1747E+02	1.2518E+05	8.4784E+04	1.7753E+05			
-			-					
1.5348E+02	2.6299E+02	1.9375E+04	1.2518E+05	7.8263E+04	3.0137E+05			
-			-					
1.5348E+02	2.1039E+02	1.9308E+04	1.2518E+05	7.1741E+04	4.1037E+05			
-			-					
1.5348E+02	1.5779E+02	4.2917E+04	1.2518E+05	6.5219E+04	7.6297E+05			
-			-					
1.5348E+02	1.0519E+02	7.6552E+04	1.2518E+05	5.8697E+04	1.1197E+06			
-			-					
1.5348E+02	5.2597E+01	1.4939E+05	1.2518E+05	5.2175E+04	2.0052E+06			
-			-					
1.5348E+02	0.0000E+00	6.3942E+05	1.2518E+05	4.5653E+04	2.9594E+06			
-			-					
2.1572E+02	1.7357E+03	1.7500E+00	1.2518E+05	3.9131E+04	4.4111E+06			
-			-					
2.1572E+02	1.6831E+03	1.6696E+00	1.2518E+05	3.2609E+04	6.7139E+06			
-			-					
2.1572E+02	1.5253E+03	3.4196E+00	1.2518E+05	2.6088E+04	8.1258E+06			
-			-					
2.1572E+02	1.4727E+03	1.6696E+00	1.2518E+05	1.9566E+04	8.1351E+06			
-			-					
2.1572E+02	1.4201E+03	1.7500E+00	1.2518E+05	1.3044E+04	7.2248E+06			
-			-					
2.1572E+02	1.3675E+03	9.2667E+00	1.2518E+05	6.5219E+03	6.5184E+06			
-			-					
2.1572E+02	1.3149E+03	3.5000E+00	1.2518E+05	0.0000E+00	1.9160E+07			
-			-					
2.1572E+02	1.2623E+03	8.5088E+00	1.3276E+05	1.5000E+05	2.3875E+01			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.1572E+02	1.2097E+03	1.7505E+01	1.3276E+05	1.3696E+05	1.2905E+03			
-			-					
2.1572E+02	1.1571E+03	1.1097E+01	1.3276E+05	1.3044E+05	8.2149E+02			
-			-					
2.1572E+02	1.1045E+03	2.9841E+01	1.3276E+05	1.2392E+05	3.3333E+03			
-			-					
2.1572E+02	1.0519E+03	1.8836E+01	1.3276E+05	1.1739E+05	2.9190E+03			
-			-					
2.1572E+02	9.9934E+02	5.1417E+00	1.3276E+05	1.1087E+05	7.1039E+03			
-			-					
2.1572E+02	9.4675E+02	5.0892E+00	1.3276E+05	1.0435E+05	1.8615E+04			
-			-					
2.1572E+02	8.9415E+02	1.5916E+01	1.3276E+05	9.7828E+04	3.5098E+04			
-			-					
2.1572E+02	8.4155E+02	1.2142E+01	1.3276E+05	9.1306E+04	7.9963E+04			
-			-					
2.1572E+02	7.8896E+02	1.0553E+01	1.3276E+05	8.4784E+04	1.0565E+05			
-			-					
2.1572E+02	7.3636E+02	6.5000E+00	1.3276E+05	7.8263E+04	2.0796E+05			
-			-					
2.1572E+02	6.8376E+02	2.8105E+01	1.3276E+05	7.1741E+04	3.9058E+05			
-			-					
2.1572E+02	6.3116E+02	2.4472E+01	1.3276E+05	6.5219E+04	9.1243E+05			
-			-					
2.1572E+02	5.7857E+02	4.0511E+01	1.3276E+05	5.8697E+04	1.4252E+06			
-			-					
2.1572E+02	5.2597E+02	2.5212E+01	1.3276E+05	5.2175E+04	2.2619E+06			
-			-					
2.1572E+02	4.7337E+02	2.8829E+01	1.3276E+05	4.5653E+04	3.7364E+06			
-			-					
2.1572E+02	4.2078E+02	3.0990E+01	1.3276E+05	3.9131E+04	5.3361E+06			
-			-					
2.1572E+02	3.6818E+02	8.1317E+01	1.3276E+05	3.2609E+04	7.3408E+06			
-			-					
2.1572E+02	3.1558E+02	9.9254E+01	1.3276E+05	2.6088E+04	9.0357E+06			
-			-					
2.1572E+02	2.6299E+02	1.8401E+02	1.3276E+05	1.9566E+04	9.6209E+06			
-			-					
2.1572E+02	2.1039E+02	1.8411E+02	1.3276E+05	1.3044E+04	8.4472E+06			
-			-					
2.1572E+02	1.5779E+02	1.0259E+02	1.3276E+05	6.5219E+03	7.3426E+06			
-			-					
2.1572E+02	1.0519E+02	2.7380E+02	1.3276E+05	0.0000E+00	2.1036E+07			
-			-					
2.1572E+02	5.2597E+01	6.3455E+04	1.4033E+05	1.3044E+05	7.9480E+01			
-			-					
2.1572E+02	0.0000E+00	2.9654E+05	1.4033E+05	1.2392E+05	1.5896E+02			
-			-					
2.7796E+02	1.9987E+03	6.2500E-01	1.4033E+05	1.1739E+05	3.7820E+03			
-			-					
2.7796E+02	1.7357E+03	1.6696E+00	1.4033E+05	1.1087E+05	9.4011E+02			
-			-					
2.7796E+02	1.6305E+03	1.7500E+00	1.4033E+05	1.0435E+05	4.8030E+03			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.7796E+02	1.5253E+03	1.6696E+00	1.4033E+05	9.7828E+04	1.4096E+04			
-			-					
2.7796E+02	1.4727E+03	1.6696E+00	1.4033E+05	9.1306E+04	2.8991E+04			
-			-					
2.7796E+02	1.3675E+03	1.6696E+00	1.4033E+05	8.4784E+04	4.7416E+04			
-			-					
2.7796E+02	1.3149E+03	5.1696E+00	1.4033E+05	7.8263E+04	1.0107E+05			
-			-					
2.7796E+02	1.2623E+03	6.6784E+00	1.4033E+05	7.1741E+04	1.4010E+05			
-			-					
2.7796E+02	1.2097E+03	1.6696E+00	1.4033E+05	6.5219E+04	3.0484E+05			
-			-					
2.7796E+02	1.1571E+03	5.0892E+00	1.4033E+05	5.8697E+04	6.3594E+05			
-			-					
2.7796E+02	1.1045E+03	3.5000E+00	1.4033E+05	5.2175E+04	1.2067E+06			
-			-					
2.7796E+02	1.0519E+03	1.3339E+01	1.4033E+05	4.5653E+04	1.9600E+06			
-			-					
2.7796E+02	9.9934E+02	6.5000E+00	1.4033E+05	3.9131E+04	3.3292E+06			
-			-					
2.7796E+02	9.4675E+02	1.5158E+00	1.4033E+05	3.2609E+04	5.0673E+06			
-			-					
2.7796E+02	8.9415E+02	8.4284E+00	1.4033E+05	2.6088E+04	6.8080E+06			
-			-					
2.7796E+02	8.4155E+02	1.3292E-01	1.4033E+05	1.9566E+04	7.7351E+06			
-			-					
2.7796E+02	7.8896E+02	3.5000E+00	1.4033E+05	1.3044E+04	7.0186E+06			
-			-					
2.7796E+02	7.3636E+02	3.3392E+00	1.4033E+05	6.5219E+03	6.3979E+06			
-			-					
2.7796E+02	6.8376E+02	1.3678E+01	1.4033E+05	0.0000E+00	1.8168E+07			
-			-					
2.7796E+02	6.3116E+02	6.6784E+00	1.4790E+05	1.2392E+05	7.9480E+01			
-			-					
2.7796E+02	5.7857E+02	4.8829E+00	1.4790E+05	1.1739E+05	1.5896E+02			
-			-					
2.7796E+02	5.2597E+02	1.7339E+01	1.4790E+05	1.1087E+05	8.1150E+01			
-			-					
2.7796E+02	4.7337E+02	3.0151E+01	1.4790E+05	1.0435E+05	1.7358E+03			
-			-					
2.7796E+02	4.2078E+02	1.2944E+01	1.4790E+05	9.7828E+04	2.4702E+03			
-			-					
2.7796E+02	3.6818E+02	4.9419E+01	1.4790E+05	9.1306E+04	7.8053E+03			
-			-					
2.7796E+02	3.1558E+02	4.5624E+01	1.4790E+05	8.4784E+04	1.1625E+04			
-			-					
2.7796E+02	2.6299E+02	3.8750E+01	1.4790E+05	7.8263E+04	2.2601E+04			
-			-					
2.7796E+02	2.1039E+02	2.3801E+01	1.4790E+05	7.1741E+04	3.1355E+04			
-			-					
2.7796E+02	1.5779E+02	4.9523E+01	1.4790E+05	6.5219E+04	7.3510E+04			
-			-					
2.7796E+02	1.0519E+02	1.7636E+02	1.4790E+05	5.8697E+04	1.4562E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.7796E+02	5.2597E+01	1.7650E+02	1.4790E+05	5.2175E+04	4.0826E+05			
-			-					
2.7796E+02	0.0000E+00	7.4376E+04	1.4790E+05	4.5653E+04	7.9703E+05			
-			-					
3.4020E+02	1.4201E+03	1.6696E+00	1.4790E+05	3.9131E+04	1.2828E+06			
-			-					
3.4020E+02	1.3675E+03	3.3392E+00	1.4790E+05	3.2609E+04	2.0417E+06			
-			-					
3.4020E+02	1.3149E+03	1.7500E+00	1.4790E+05	2.6088E+04	3.0681E+06			
-			-					
3.4020E+02	1.2097E+03	3.3392E+00	1.4790E+05	1.9566E+04	3.4361E+06			
-			-					
3.4020E+02	1.1571E+03	1.6696E+00	1.4790E+05	1.3044E+04	3.4185E+06			
-			-					
3.4020E+02	1.0519E+03	3.5000E+00	1.4790E+05	6.5219E+03	3.3312E+06			
-			-					
3.4020E+02	9.4675E+02	3.4721E+00	1.4790E+05	0.0000E+00	9.7834E+06			
-			-					
3.4020E+02	8.4155E+02	3.3392E+00	1.5547E+05	8.4784E+04	1.5896E+02			
-			-					
3.4020E+02	7.8896E+02	1.3292E-01	1.5547E+05	7.1741E+04	4.9470E+03			
-			-					
3.4020E+02	7.3636E+02	4.8829E+00	1.5547E+05	6.5219E+04	1.2926E+04			
-			-					
3.4020E+02	6.8376E+02	8.3550E+00	1.5547E+05	5.8697E+04	2.2318E+04			
-			-					
3.4020E+02	6.3116E+02	1.3292E-01	1.5547E+05	5.2175E+04	3.6889E+04			
-			-					
3.4020E+02	5.7857E+02	2.8110E+01	1.5547E+05	4.5653E+04	1.1534E+05			
-			-					
3.4020E+02	5.2597E+02	3.5000E+00	1.5547E+05	3.9131E+04	3.4455E+05			
-			-					
3.4020E+02	4.7337E+02	1.2500E+00	1.5547E+05	3.2609E+04	4.1150E+05			
-			-					
3.4020E+02	4.2078E+02	2.3857E+01	1.5547E+05	2.6088E+04	8.1702E+05			
-			-					
3.4020E+02	3.6818E+02	4.7500E+00	1.5547E+05	1.9566E+04	9.0264E+05			
-			-					
3.4020E+02	3.1558E+02	1.3000E+01	1.5547E+05	1.3044E+04	8.8247E+05			
-			-					
3.4020E+02	2.6299E+02	3.1549E+01	1.5547E+05	6.5219E+03	9.1957E+05			
-			-					
3.4020E+02	2.1039E+02	3.6199E+01	1.5547E+05	0.0000E+00	3.5738E+06			
-			-					
3.4020E+02	1.5779E+02	3.0801E+01	1.6304E+05	7.8263E+04	4.7750E+01			
-			-					
3.4020E+02	1.0519E+02	1.1068E+02	1.6304E+05	6.5219E+04	4.7750E+01			
-			-					
3.4020E+02	5.2597E+01	1.5135E+02	1.6304E+05	5.8697E+04	1.2288E+03			
-			-					
3.4020E+02	0.0000E+00	1.5192E+04	1.6304E+05	4.5653E+04	1.4907E+04			
-			-					
4.0243E+02	1.6305E+03	1.6696E+00	1.6304E+05	3.9131E+04	8.7817E+03			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
4.0243E+02	1.4201E+03	1.6696E+00	1.6304E+05	3.2609E+04	3.7322E+04			
-			-					
4.0243E+02	1.3149E+03	1.6696E+00	1.6304E+05	2.6088E+04	4.0019E+04			
-			-					
4.0243E+02	1.2097E+03	1.6696E+00	1.6304E+05	1.9566E+04	7.8058E+04			
-			-					
4.0243E+02	1.0519E+03	3.5000E+00	1.6304E+05	1.3044E+04	9.6988E+04			
-			-					
4.0243E+02	8.9415E+02	3.5000E+00	1.6304E+05	6.5219E+03	1.2109E+05			
-			-					
4.0243E+02	7.3636E+02	3.5000E+00	1.6304E+05	0.0000E+00	8.4439E+05			
-			-					
4.0243E+02	6.8376E+02	7.0000E+00	1.7061E+05	5.2175E+04	3.3392E+00			
-			-					
4.0243E+02	6.3116E+02	3.5000E+00	1.7061E+05	4.5653E+04	3.3392E+00			
-			-					
4.0243E+02	5.2597E+02	1.7018E+01	1.7061E+05	3.9131E+04	3.3392E+00			
-			-					
4.0243E+02	4.7337E+02	6.8392E+00	1.7061E+05	3.2609E+04	6.6784E+00			
-			-					
4.0243E+02	4.2078E+02	8.0892E+00	1.7061E+05	2.6088E+04	6.6784E+00			
-			-					
4.0243E+02	3.6818E+02	1.2500E+00	1.7061E+05	1.9566E+04	3.0948E+03			
-			-					
4.0243E+02	3.1558E+02	2.7678E+01	1.7061E+05	1.3044E+04	1.3357E+01			
-			-					
4.0243E+02	2.6299E+02	3.0039E+01	1.7061E+05	6.5219E+03	1.2141E+03			
-			-					
4.0243E+02	2.1039E+02	1.0472E+01	1.7061E+05	0.0000E+00	1.0720E+05			
-			-					
4.0243E+02	1.5779E+02	4.7322E+01	1.7818E+05	1.3044E+04	6.6784E+00			
-			-					
4.0243E+02	1.0519E+02	4.4939E+01	1.7818E+05	6.5219E+03	1.0018E+01			
-			-					
4.0243E+02	5.2597E+01	1.2845E+02	1.7818E+05	0.0000E+00	2.5303E+02			
-			-					
4.0243E+02	0.0000E+00	1.9495E+02	1.8575E+05	1.9566E+04	3.3392E+00			
-			-					
4.6467E+02	1.1571E+03	6.8392E+00	1.8575E+05	0.0000E+00	6.6784E+00			
-			-					
4.6467E+02	7.3636E+02	1.0500E+01	1.9332E+05	0.0000E+00	3.3392E+00			
-								
4.6467E+02	6.8376E+02	1.6360E+01						
-								
4.6467E+02	6.3116E+02	6.6784E+00						
-								
4.6467E+02	5.7857E+02	3.5000E+00						
-								
4.6467E+02	5.2597E+02	3.3392E+00						
-								
4.6467E+02	4.7337E+02	2.0021E+01						
-								
4.6467E+02	4.2078E+02	2.0021E+01						



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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-								
4.6467E+02	3.6818E+02	1.0339E+01						
-								
4.6467E+02	3.1558E+02	1.7178E+01						
-								
4.6467E+02	2.6299E+02	6.6784E+00						
-								
4.6467E+02	2.1039E+02	3.9560E+01						
-								
4.6467E+02	1.5779E+02	2.3990E+01						
-								
4.6467E+02	1.0519E+02	6.2278E+01						
-								
4.6467E+02	5.2597E+01	8.4588E+01						
-								
4.6467E+02	0.0000E+00	1.3101E+02						
-								
5.2691E+02	1.4201E+03	1.2500E+00						
-								
5.2691E+02	8.4155E+02	3.5000E+00						
-								
5.2691E+02	5.2597E+02	1.0339E+01						
-								
5.2691E+02	4.7337E+02	3.5000E+00						
-								
5.2691E+02	4.2078E+02	3.5000E+00						
-								
5.2691E+02	3.6818E+02	3.3392E+00						
-								
5.2691E+02	3.1558E+02	1.7178E+01						
-								
5.2691E+02	2.6299E+02	1.7151E+01						
-								
5.2691E+02	1.5779E+02	2.0196E+01						
-								
5.2691E+02	1.0519E+02	6.7210E+01						
-								
5.2691E+02	5.2597E+01	8.0259E+01						
-								
5.2691E+02	0.0000E+00	7.8541E+01						
-								
5.8915E+02	8.4155E+02	3.5000E+00						
-								
5.8915E+02	6.8376E+02	3.5000E+00						
-								
5.8915E+02	4.7337E+02	1.0178E+01						
-								
5.8915E+02	3.6818E+02	3.5000E+00						
-								
5.8915E+02	3.1558E+02	1.0018E+01						
-								
5.8915E+02	2.6299E+02	1.0311E+01						
-								
5.8915E+02	2.1039E+02	3.5000E+00						



DNV Denmark A/S
Tuborg Parkvej 8, 2.
DK-2900 Hellerup
VAT No. DK9832314

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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-								
5.8915E+02	1.5779E+02	2.0357E+01						
-								
5.8915E+02	1.0519E+02	3.6892E+01						
-								
5.8915E+02	5.2597E+01	5.7214E+01						
-								
5.8915E+02	0.0000E+00	6.0133E+01						
-								
6.5139E+02	4.7337E+02	3.3392E+00						
-								
6.5139E+02	3.6818E+02	3.3392E+00						
-								
6.5139E+02	3.1558E+02	3.3392E+00						
-								
6.5139E+02	2.1039E+02	3.3392E+00						
-								
6.5139E+02	1.5779E+02	1.3490E+01						
-								
6.5139E+02	1.0519E+02	2.0490E+01						
-								
6.5139E+02	5.2597E+01	5.2518E+01						
-								
6.5139E+02	0.0000E+00	5.3350E+01						
-								
7.1363E+02	3.1558E+02	3.3392E+00						
-								
7.1363E+02	2.1039E+02	1.0018E+01						
-								
7.1363E+02	1.5779E+02	6.6784E+00						
-								
7.1363E+02	1.0519E+02	6.8392E+00						
-								
7.1363E+02	5.2597E+01	2.5268E+01						
-								
7.1363E+02	0.0000E+00	4.8949E+01						
-								
7.7587E+02	4.7337E+02	3.3392E+00						
-								
7.7587E+02	4.2078E+02	3.3392E+00						
-								
7.7587E+02	2.1039E+02	3.3392E+00						
-								
7.7587E+02	1.5779E+02	3.3392E+00						
-								
7.7587E+02	1.0519E+02	3.3392E+00						
-								
7.7587E+02	5.2597E+01	6.6784E+00						
-								
7.7587E+02	0.0000E+00	1.3678E+01						
-								
8.3811E+02	3.6818E+02	3.3392E+00						
-								
8.3811E+02	1.5779E+02	6.8392E+00						



DNV Denmark A/S
Tuborg Parkvej 8, 2.
DK-2900 Hellerup
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Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
- 8.3811E+02	1.0519E+02	3.3392E+00						
- 8.3811E+02	5.2597E+01	1.0339E+01						
- 8.3811E+02	0.0000E+00	3.3392E+00						
- 9.0035E+02	1.0519E+02	3.3392E+00						
- 9.0035E+02	5.2597E+01	1.0151E+01						
- 9.0035E+02	0.0000E+00	3.5000E+00						
- 9.6258E+02	5.2597E+01	3.3392E+00						
- 9.6258E+02	0.0000E+00	3.3392E+00						
- 1.0248E+03	5.2597E+01	3.3392E+00						

Table 5-17 [7] Markov Matrix

Appendix J. Markov matrices – issued from [8]

This appendix contains the Markov Matrices for the shear force, the bending moment and the torsional moment in the bottom of the tower, from ref. [8]. Foundation design must be verified for the most critical Markov matrices.

Markov Matrices								
Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.5548E+03	0.0000E+00	1.5896E+02	1.4614E+05	0.0000E+00	3.3392E+00	7.9732E+03	0.0000E+00	3.3392E+00
1.4892E+03	0.0000E+00	2.6024E+03	1.3855E+05	1.9757E+04	3.3392E+00	7.4327E+03	3.8241E+03	3.3392E+00
1.4236E+03	5.7153E+01	1.0815E+02	1.3097E+05	6.5856E+03	3.3392E+00	7.4327E+03	0.0000E+00	1.2500E+00
1.4236E+03	0.0000E+00	1.1415E+04	1.2338E+05	6.5856E+03	1.0018E+01	6.8922E+03	4.3021E+03	3.3392E+00
1.3580E+03	1.1431E+02	1.0815E+02	1.2338E+05	0.0000E+00	1.0018E+01	6.8922E+03	4.7801E+02	6.0878E+00
1.3580E+03	5.7153E+01	1.5741E+03	1.1579E+05	6.5856E+03	6.6784E+00	6.8922E+03	0.0000E+00	1.7797E+02
1.3580E+03	0.0000E+00	1.6077E+04	1.1579E+05	0.0000E+00	1.6857E+01	6.3517E+03	2.3901E+03	3.3392E+00
1.2925E+03	5.7153E+01	1.0318E+04	1.0821E+05	1.3171E+04	3.3392E+00	6.3517E+03	9.5603E+02	4.5892E+00
1.2925E+03	0.0000E+00	6.0747E+04	1.0821E+05	6.5856E+03	6.6784E+00	6.3517E+03	4.7801E+02	3.5000E+00
1.2269E+03	1.7146E+02	3.3392E+00	1.0821E+05	0.0000E+00	6.8392E+00	6.3517E+03	0.0000E+00	3.5000E+00
1.2269E+03	1.1431E+02	5.1272E+03	1.0062E+05	3.9514E+04	3.5000E+00	5.8112E+03	7.1702E+03	3.3392E+00
1.2269E+03	5.7153E+01	3.9158E+04	1.0062E+05	1.9757E+04	3.3392E+00	5.8112E+03	1.9121E+03	3.5000E+00
1.2269E+03	0.0000E+00	3.7607E+05	1.0062E+05	6.5856E+03	3.5000E+00	5.8112E+03	9.5603E+02	1.0654E+01
1.1613E+03	4.5722E+02	7.9480E+01	1.0062E+05	0.0000E+00	3.0347E+01	5.8112E+03	4.7801E+02	3.8705E+03
1.1613E+03	3.4292E+02	6.5105E+00	9.3033E+04	2.6342E+04	3.3392E+00	5.8112E+03	0.0000E+00	9.3411E+03
1.1613E+03	2.8576E+02	2.7344E+03	9.3033E+04	6.5856E+03	2.0490E+01	5.2708E+03	5.2581E+03	3.3392E+00
1.1613E+03	1.7146E+02	1.6704E+03	9.3033E+04	0.0000E+00	6.2035E+01	5.2708E+03	1.9121E+03	1.3292E+01
1.1613E+03	1.1431E+02	1.8789E+04	8.5447E+04	7.9027E+04	1.2500E+00	5.2708E+03	9.5603E+02	2.7575E+03
1.1613E+03	5.7153E+01	2.0313E+05	8.5447E+04	3.9514E+04	1.0500E+01	5.2708E+03	4.7801E+02	7.6424E+03
1.1613E+03	0.0000E+00	8.9253E+05	8.5447E+04	3.2928E+04	6.8392E+00	5.2708E+03	0.0000E+00	8.5249E+04
1.0958E+03	1.0859E+03	2.3875E+01	8.5447E+04	2.6342E+04	7.0000E+00	4.7303E+03	2.8681E+03	5.0432E+02
1.0958E+03	6.2868E+02	9.3590E-01	8.5447E+04	1.3171E+04	1.0339E+01	4.7303E+03	2.3901E+03	1.7493E+01
1.0958E+03	5.7153E+02	5.0088E+00	8.5447E+04	6.5856E+03	1.3811E+01	4.7303E+03	1.9121E+03	8.7056E+02
1.0958E+03	4.0007E+02	1.7698E+02	8.5447E+04	0.0000E+00	6.7973E+01	4.7303E+03	1.4340E+03	3.5000E+00
1.0958E+03	2.2861E+02	2.2318E+03	7.7860E+04	9.2199E+04	3.3392E+00	4.7303E+03	9.5603E+02	3.1185E+04
1.0958E+03	1.7146E+02	6.7732E+02	7.7860E+04	6.5856E+04	3.5000E+00	4.7303E+03	4.7801E+02	6.1728E+04
1.0958E+03	1.1431E+02	7.2484E+04	7.7860E+04	3.2928E+04	1.3154E+01	4.7303E+03	0.0000E+00	2.8354E+05
1.0958E+03	5.7153E+01	6.6960E+05	7.7860E+04	2.6342E+04	1.5089E+01	4.1898E+03	7.1702E+03	1.8279E+01
1.0958E+03	0.0000E+00	2.4627E+06	7.7860E+04	1.9757E+04	1.3839E+01	4.1898E+03	6.6922E+03	1.9961E+02
1.0302E+03	1.3145E+03	4.7750E+01	7.7860E+04	1.3171E+04	5.3720E+01	4.1898E+03	6.2142E+03	3.4721E+00
1.0302E+03	9.7160E+02	6.7040E+02	7.7860E+04	6.5856E+03	2.0678E+01	4.1898E+03	4.3021E+03	3.3392E+00
1.0302E+03	9.1445E+02	3.3392E+00	7.7860E+04	0.0000E+00	8.3934E+01	4.1898E+03	3.8241E+03	9.4270E+00
1.0302E+03	8.5729E+02	4.7750E+01	7.0273E+04	1.9757E+05	1.6696E+00	4.1898E+03	3.3461E+03	8.8252E+03
1.0302E+03	7.4299E+02	3.3392E+00	7.0273E+04	4.6099E+04	3.5000E+00	4.1898E+03	2.8681E+03	2.8354E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.0302E+03	6.8584E+02	1.1483E+02	7.0273E+04	3.2928E+04	3.6329E+00	4.1898E+03	2.3901E+03	1.6143E+04
1.0302E+03	6.2868E+02	1.1810E+03	7.0273E+04	2.6342E+04	3.5000E+00	4.1898E+03	1.9121E+03	2.8648E+04
1.0302E+03	5.7153E+02	3.3392E+00	7.0273E+04	1.9757E+04	1.0500E+01	4.1898E+03	1.4340E+03	2.5742E+04
1.0302E+03	5.1438E+02	2.2452E+03	7.0273E+04	1.3171E+04	6.6784E+00	4.1898E+03	9.5603E+02	9.1624E+04
1.0302E+03	4.5722E+02	7.5039E+03	7.0273E+04	6.5856E+03	2.3857E+01	4.1898E+03	4.7801E+02	3.4992E+05
1.0302E+03	4.0007E+02	6.7866E+01	7.0273E+04	0.0000E+00	8.5247E+01	4.1898E+03	0.0000E+00	1.0480E+06
1.0302E+03	3.4292E+02	9.0020E+02	6.2687E+04	1.7123E+05	3.3392E+00	3.6493E+03	6.2142E+03	3.8637E+03
1.0302E+03	2.8576E+02	6.0720E+02	6.2687E+04	1.6464E+05	1.6696E+00	3.6493E+03	5.7362E+03	3.3392E+00
1.0302E+03	2.2861E+02	5.8342E+03	6.2687E+04	1.5805E+05	1.6696E+00	3.6493E+03	5.2581E+03	5.5059E+00
1.0302E+03	1.7146E+02	5.0910E+04	6.2687E+04	1.3830E+05	1.6696E+00	3.6493E+03	4.7801E+03	1.5425E+04
1.0302E+03	1.1431E+02	2.8116E+05	6.2687E+04	4.6099E+04	3.5000E+00	3.6493E+03	4.3021E+03	9.2440E+03
1.0302E+03	5.7153E+01	2.3453E+06	6.2687E+04	3.2928E+04	1.1722E+01	3.6493E+03	3.8241E+03	3.5523E+04
1.0302E+03	0.0000E+00	5.9433E+06	6.2687E+04	2.6342E+04	1.1589E+01	3.6493E+03	3.3461E+03	1.0238E+05
9.6461E+02	1.6003E+03	8.6790E+02	6.2687E+04	1.9757E+04	4.7500E+00	3.6493E+03	2.8681E+03	1.1904E+05
9.6461E+02	1.3145E+03	2.2318E+03	6.2687E+04	1.3171E+04	3.6329E+00	3.6493E+03	2.3901E+03	2.6191E+05
9.6461E+02	1.2574E+03	4.7750E+01	6.2687E+04	6.5856E+03	2.5428E+01	3.6493E+03	1.9121E+03	3.7794E+05
9.6461E+02	1.2002E+03	1.4000E+03	6.2687E+04	0.0000E+00	5.8785E+01	3.6493E+03	1.4340E+03	2.1068E+05
9.6461E+02	1.1431E+03	4.4636E+03	5.5100E+04	1.5805E+05	1.6696E+00	3.6493E+03	9.5603E+02	3.9724E+05
9.6461E+02	1.0859E+03	3.4716E+03	5.5100E+04	1.4488E+05	5.0892E+00	3.6493E+03	4.7801E+02	1.0213E+06
9.6461E+02	1.0288E+03	1.8948E+03	5.5100E+04	1.3830E+05	1.6696E+00	3.6493E+03	0.0000E+00	2.6089E+06
9.6461E+02	9.7160E+02	7.9188E+02	5.5100E+04	7.9027E+04	3.3392E+00	3.1088E+03	1.4818E+04	1.6696E+00
9.6461E+02	9.1445E+02	1.6650E+03	5.5100E+04	5.9270E+04	3.4721E+00	3.1088E+03	1.3384E+04	6.2500E-01
9.6461E+02	8.5729E+02	5.5446E+03	5.5100E+04	5.2685E+04	3.5000E+00	3.1088E+03	7.6482E+03	5.4722E+03
9.6461E+02	8.0014E+02	2.3720E+04	5.5100E+04	4.6099E+04	6.8392E+00	3.1088E+03	7.1702E+03	3.5382E+02
9.6461E+02	7.4299E+02	1.7893E+04	5.5100E+04	3.9514E+04	3.5000E+00	3.1088E+03	6.2142E+03	1.0054E+03
9.6461E+02	6.8584E+02	3.7936E+04	5.5100E+04	3.2928E+04	1.3972E+01	3.1088E+03	5.7362E+03	2.0285E+03
9.6461E+02	6.2868E+02	7.3776E+04	5.5100E+04	2.6342E+04	9.7658E+00	3.1088E+03	5.2581E+03	4.2333E+04
9.6461E+02	5.7153E+02	6.8120E+04	5.5100E+04	1.9757E+04	6.8392E+00	3.1088E+03	4.7801E+03	7.0081E+04
9.6461E+02	5.1438E+02	1.1302E+05	5.5100E+04	1.3171E+04	2.5539E+01	3.1088E+03	4.3021E+03	1.6181E+05
9.6461E+02	4.5722E+02	1.0062E+05	5.5100E+04	6.5856E+03	5.6901E+01	3.1088E+03	3.8241E+03	3.2224E+05
9.6461E+02	4.0007E+02	1.3796E+05	5.5100E+04	0.0000E+00	9.2886E+01	3.1088E+03	3.3461E+03	3.2053E+05
9.6461E+02	3.4292E+02	1.3924E+05	4.7513E+04	1.5805E+05	3.4196E+00	3.1088E+03	2.8681E+03	5.6101E+05
9.6461E+02	2.8576E+02	1.3155E+05	4.7513E+04	1.5147E+05	1.6696E+00	3.1088E+03	2.3901E+03	6.0941E+05
9.6461E+02	2.2861E+02	1.5715E+05	4.7513E+04	1.3830E+05	1.2009E+01	3.1088E+03	1.9121E+03	5.4700E+05
9.6461E+02	1.7146E+02	3.1836E+05	4.7513E+04	1.3171E+05	1.7500E+00	3.1088E+03	1.4340E+03	5.4301E+05
9.6461E+02	1.1431E+02	1.2790E+06	4.7513E+04	1.2513E+05	3.5000E+00	3.1088E+03	9.5603E+02	8.2778E+05
9.6461E+02	5.7153E+01	5.7178E+06	4.7513E+04	1.1854E+05	1.7500E+00	3.1088E+03	4.7801E+03	2.2281E+06
9.6461E+02	0.0000E+00	1.1664E+07	4.7513E+04	9.2199E+04	3.3392E+00	3.1088E+03	0.0000E+00	4.4951E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.9904E+02	1.9432E+03	7.9480E+01	4.7513E+04	8.5613E+04	3.3392E+00	2.5683E+03	1.3862E+04	6.2500E-01
8.9904E+02	1.8860E+03	7.9480E+01	4.7513E+04	7.2442E+04	6.6784E+00	2.5683E+03	1.1472E+04	1.3292E-01
8.9904E+02	1.8289E+03	7.9480E+01	4.7513E+04	5.9270E+04	4.5892E+00	2.5683E+03	1.0516E+04	5.0892E+00
8.9904E+02	1.7717E+03	1.9742E+03	4.7513E+04	5.2685E+04	4.7500E+00	2.5683E+03	1.0038E+04	1.7500E+00
8.9904E+02	1.7146E+03	2.3099E+02	4.7513E+04	3.9514E+04	8.0613E+00	2.5683E+03	8.6042E+03	1.3292E-01
8.9904E+02	1.6574E+03	1.0015E+03	4.7513E+04	3.2928E+04	1.7633E+01	2.5683E+03	8.1262E+03	2.6491E+01
8.9904E+02	1.6003E+03	1.6625E+03	4.7513E+04	2.6342E+04	4.9552E+01	2.5683E+03	7.6482E+03	1.6680E+02
8.9904E+02	1.5431E+03	1.7403E+03	4.7513E+04	1.9757E+04	3.6299E+01	2.5683E+03	7.1702E+03	1.9311E+03
8.9904E+02	1.4860E+03	1.7943E+03	4.7513E+04	1.3171E+04	2.9166E+01	2.5683E+03	6.6922E+03	2.3090E+04
8.9904E+02	1.4288E+03	5.6860E+03	4.7513E+04	6.5856E+03	5.3651E+01	2.5683E+03	6.2142E+03	4.3393E+04
8.9904E+02	1.3717E+03	9.6742E+03	4.7513E+04	0.0000E+00	1.4890E+04	2.5683E+03	5.7362E+03	1.2717E+05
8.9904E+02	1.3145E+03	5.2282E+03	3.9927E+04	1.8440E+05	2.2946E+00	2.5683E+03	5.2581E+03	1.7573E+05
8.9904E+02	1.2574E+03	8.8131E+03	3.9927E+04	1.5805E+05	1.7500E+00	2.5683E+03	4.7801E+03	2.5047E+05
8.9904E+02	1.2002E+03	3.8644E+03	3.9927E+04	1.5147E+05	6.8392E+00	2.5683E+03	4.3021E+03	5.1878E+05
8.9904E+02	1.1431E+03	2.3334E+04	3.9927E+04	1.4488E+05	7.0000E+00	2.5683E+03	3.8241E+03	6.6803E+05
8.9904E+02	1.0859E+03	3.4158E+04	3.9927E+04	1.3830E+05	8.6696E+00	2.5683E+03	3.3461E+03	7.5974E+05
8.9904E+02	1.0288E+03	5.3338E+04	3.9927E+04	1.3171E+05	6.9196E+00	2.5683E+03	2.8681E+03	1.0476E+06
8.9904E+02	9.7160E+02	5.9473E+04	3.9927E+04	1.2513E+05	8.5892E+00	2.5683E+03	2.3901E+03	9.5751E+05
8.9904E+02	9.1445E+02	1.4007E+05	3.9927E+04	1.1854E+05	5.1696E+00	2.5683E+03	1.9121E+03	9.5320E+05
8.9904E+02	8.5729E+02	1.9637E+05	3.9927E+04	1.1196E+05	5.0892E+00	2.5683E+03	1.4340E+03	1.1933E+06
8.9904E+02	8.0014E+02	2.9013E+05	3.9927E+04	1.0537E+05	3.3392E+00	2.5683E+03	9.5603E+02	1.6969E+06
8.9904E+02	7.4299E+02	4.2299E+05	3.9927E+04	7.9027E+04	3.4721E+00	2.5683E+03	4.7801E+02	4.0580E+06
8.9904E+02	6.8584E+02	6.2768E+05	3.9927E+04	7.2442E+04	3.4721E+00	2.5683E+03	0.0000E+00	8.9079E+06
8.9904E+02	6.2868E+02	8.6305E+05	3.9927E+04	6.5856E+04	1.7178E+01	2.0279E+03	1.1472E+04	1.6696E+00
8.9904E+02	5.7153E+02	1.0840E+06	3.9927E+04	5.9270E+04	1.3839E+01	2.0279E+03	1.0994E+04	3.5665E+00
8.9904E+02	5.1438E+02	1.4218E+06	3.9927E+04	5.2685E+04	2.4965E+01	2.0279E+03	1.0516E+04	2.5208E+02
8.9904E+02	4.5722E+02	1.5954E+06	3.9927E+04	4.6099E+04	1.4928E+01	2.0279E+03	1.0038E+04	8.2819E+01
8.9904E+02	4.0007E+02	1.7066E+06	3.9927E+04	3.9514E+04	1.7500E+01	2.0279E+03	9.5603E+03	2.7947E+03
8.9904E+02	3.4292E+02	1.9632E+06	3.9927E+04	3.2928E+04	3.3518E+01	2.0279E+03	9.0823E+03	2.5574E+02
8.9904E+02	2.8576E+02	1.7940E+06	3.9927E+04	2.6342E+04	5.1612E+01	2.0279E+03	8.6042E+03	7.0175E+02
8.9904E+02	2.2861E+02	1.3678E+06	3.9927E+04	1.9757E+04	1.2443E+02	2.0279E+03	8.1262E+03	7.5565E+03
8.9904E+02	1.7146E+02	1.8835E+06	3.9927E+04	1.3171E+04	7.8207E+01	2.0279E+03	7.6482E+03	2.5812E+04
8.9904E+02	1.1431E+02	3.7765E+06	3.9927E+04	6.5856E+03	1.2027E+02	2.0279E+03	7.1702E+03	5.2648E+04
8.9904E+02	5.7153E+01	1.1798E+07	3.9927E+04	0.0000E+00	1.5039E+04	2.0279E+03	6.6922E+03	1.0389E+05
8.9904E+02	0.0000E+00	1.9642E+07	3.2340E+04	1.7123E+05	1.7500E+00	2.0279E+03	6.2142E+03	1.9927E+05
8.3347E+02	2.1147E+03	2.3875E+01	3.2340E+04	1.6464E+05	1.8165E+00	2.0279E+03	5.7362E+03	3.1880E+05
8.3347E+02	2.0004E+03	4.3330E+02	3.2340E+04	1.5805E+05	1.6696E+00	2.0279E+03	5.2581E+03	2.8850E+05
8.3347E+02	1.9432E+03	1.5896E+02	3.2340E+04	1.5147E+05	1.7500E+00	2.0279E+03	4.7801E+03	6.589E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
8.3347E+02	1.8860E+03	1.2578E+03	3.2340E+04	1.4488E+05	3.3392E+00	2.0279E+03	4.3021E+03	7.9265E+05
8.3347E+02	1.8289E+03	5.0119E+03	3.2340E+04	1.3830E+05	6.7588E+00	2.0279E+03	3.8241E+03	1.1148E+06
8.3347E+02	1.7717E+03	3.5945E+03	3.2340E+04	1.3171E+05	8.6696E+00	2.0279E+03	3.3461E+03	1.4113E+06
8.3347E+02	1.7146E+03	8.5910E+02	3.2340E+04	1.2513E+05	7.4642E+00	2.0279E+03	2.8681E+03	1.8330E+06
8.3347E+02	1.6574E+03	3.9621E+03	3.2340E+04	1.1854E+05	5.2500E+00	2.0279E+03	2.3901E+03	1.7699E+06
8.3347E+02	1.6003E+03	5.9107E+03	3.2340E+04	1.1196E+05	5.1696E+00	2.0279E+03	1.9121E+03	1.8871E+06
8.3347E+02	1.5431E+03	7.3503E+03	3.2340E+04	1.0537E+05	1.7500E+00	2.0279E+03	1.4340E+03	2.1469E+06
8.3347E+02	1.4860E+03	2.8664E+04	3.2340E+04	9.8784E+04	3.5000E+00	2.0279E+03	9.5603E+02	3.0519E+06
8.3347E+02	1.4288E+03	2.6417E+04	3.2340E+04	9.2199E+04	1.0339E+01	2.0279E+03	4.7801E+02	6.4727E+06
8.3347E+02	1.3717E+03	2.5540E+04	3.2340E+04	7.9027E+04	1.0339E+01	2.0279E+03	0.0000E+00	1.3893E+07
8.3347E+02	1.3145E+03	5.8024E+04	3.2340E+04	7.2442E+04	2.4832E+01	1.4874E+03	1.8165E+04	1.6696E+00
8.3347E+02	1.2574E+03	1.1221E+05	3.2340E+04	6.5856E+04	7.0000E+00	1.4874E+03	1.4340E+04	2.1230E+00
8.3347E+02	1.2002E+03	1.1542E+05	3.2340E+04	5.9270E+04	3.7643E+01	1.4874E+03	1.2428E+04	2.6245E+02
8.3347E+02	1.1431E+03	1.8297E+05	3.2340E+04	5.2685E+04	2.5589E+01	1.4874E+03	1.1950E+04	1.9073E+00
8.3347E+02	1.0859E+03	2.6104E+05	3.2340E+04	4.6099E+04	1.8750E+01	1.4874E+03	1.1472E+04	6.8282E+01
8.3347E+02	1.0288E+03	4.5479E+05	3.2340E+04	3.9514E+04	6.0435E+01	1.4874E+03	1.0994E+04	1.5468E+03
8.3347E+02	9.7160E+02	5.9455E+05	3.2340E+04	3.2928E+04	1.0831E+02	1.4874E+03	1.0516E+04	3.2639E+01
8.3347E+02	9.1445E+02	8.7003E+05	3.2340E+04	2.6342E+04	9.5057E+01	1.4874E+03	1.0038E+04	6.8671E+02
8.3347E+02	8.5729E+02	1.1358E+06	3.2340E+04	1.9757E+04	3.0379E+02	1.4874E+03	9.5603E+03	1.6309E+03
8.3347E+02	8.0014E+02	1.6498E+06	3.2340E+04	1.3171E+04	4.6282E+03	1.4874E+03	9.0823E+03	4.6724E+03
8.3347E+02	7.4299E+02	2.3218E+06	3.2340E+04	6.5856E+03	3.8277E+04	1.4874E+03	8.6042E+03	2.9355E+04
8.3347E+02	6.8584E+02	2.8201E+06	3.2340E+04	0.0000E+00	6.0215E+04	1.4874E+03	8.1262E+03	2.4007E+04
8.3347E+02	6.2868E+02	3.3351E+06	2.4754E+04	1.5805E+05	1.6696E+00	1.4874E+03	7.6482E+03	6.8375E+04
8.3347E+02	5.7153E+02	4.0400E+06	2.4754E+04	1.5147E+05	4.1111E+00	1.4874E+03	7.1702E+03	1.0963E+05
8.3347E+02	5.1438E+02	5.0067E+06	2.4754E+04	1.3830E+05	6.2500E-01	1.4874E+03	6.6922E+03	1.6277E+05
8.3347E+02	4.5722E+02	5.4607E+06	2.4754E+04	1.3171E+05	3.5000E+00	1.4874E+03	6.2142E+03	2.9966E+05
8.3347E+02	4.0007E+02	5.7206E+06	2.4754E+04	1.2513E+05	2.3750E+00	1.4874E+03	5.7362E+03	3.5527E+05
8.3347E+02	3.4292E+02	6.1002E+06	2.4754E+04	1.1854E+05	6.2500E-01	1.4874E+03	5.2581E+03	7.5068E+05
8.3347E+02	2.8576E+02	5.5580E+06	2.4754E+04	1.1196E+05	1.7500E+00	1.4874E+03	4.7801E+03	8.4376E+05
8.3347E+02	2.2861E+02	4.4269E+06	2.4754E+04	1.0537E+05	1.4166E+01	1.4874E+03	4.3021E+03	1.2023E+06
8.3347E+02	1.7146E+02	4.4852E+06	2.4754E+04	9.8784E+04	2.3750E+00	1.4874E+03	3.8241E+03	1.6903E+06
8.3347E+02	1.1431E+02	7.5082E+06	2.4754E+04	9.2199E+04	2.4671E+01	1.4874E+03	3.3461E+03	1.9452E+06
8.3347E+02	5.7153E+01	1.9103E+07	2.4754E+04	8.5613E+04	2.4832E+01	1.4874E+03	2.8681E+03	2.5442E+06
8.3347E+02	0.0000E+00	2.6915E+07	2.4754E+04	7.9027E+04	2.4710E+01	1.4874E+03	2.3901E+03	2.9715E+06
7.6789E+02	2.4004E+03	1.7691E+02	2.4754E+04	7.2442E+04	2.0598E+01	1.4874E+03	1.9121E+03	3.4364E+06
7.6789E+02	2.2861E+03	3.5382E+02	2.4754E+04	6.5856E+04	2.4178E+01	1.4874E+03	1.4340E+03	3.1811E+06
7.6789E+02	2.2290E+03	2.3875E+01	2.4754E+04	5.9270E+04	9.4512E+01	1.4874E+03	9.5603E+02	1.4123E+06
7.6789E+02	2.0575E+03	1.7691E+02	2.4754E+04	5.2685E+04	7.0575E+01	1.4874E+03	4.7801E+02	9.9351E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.6789E+02	2.0004E+03	5.3073E+02	2.4754E+04	4.6099E+04	6.3687E+01	1.4874E+03	0.0000E+00	2.2769E+07
7.6789E+02	1.9432E+03	7.0140E+02	2.4754E+04	3.9514E+04	2.6167E+02	9.4689E+02	1.6252E+04	6.6460E-02
7.6789E+02	1.8860E+03	3.9297E+02	2.4754E+04	3.2928E+04	1.2907E+02	9.4689E+02	1.5296E+04	1.1636E+02
7.6789E+02	1.8289E+03	1.8545E+03	2.4754E+04	2.6342E+04	4.2349E+02	9.4689E+02	1.4818E+04	1.9961E+02
7.6789E+02	1.7717E+03	2.3107E+03	2.4754E+04	1.9757E+04	4.7204E+03	9.4689E+02	1.4340E+04	1.6696E+00
7.6789E+02	1.7146E+03	1.2684E+04	2.4754E+04	1.3171E+04	2.4118E+04	9.4689E+02	1.3862E+04	3.3567E+01
7.6789E+02	1.6574E+03	1.4155E+04	2.4754E+04	6.5856E+03	5.2600E+04	9.4689E+02	1.3384E+04	1.9938E-01
7.6789E+02	1.6003E+03	3.4145E+04	2.4754E+04	0.0000E+00	3.3811E+05	9.4689E+02	1.2906E+04	2.2372E+03
7.6789E+02	1.5431E+03	2.8385E+04	1.7167E+04	1.6464E+05	6.6460E-02	9.4689E+02	1.2428E+04	1.5230E+02
7.6789E+02	1.4860E+03	3.9582E+04	1.7167E+04	1.5147E+05	5.0088E+00	9.4689E+02	1.1950E+04	2.2474E+02
7.6789E+02	1.4288E+03	6.2788E+04	1.7167E+04	1.3830E+05	6.9146E-01	9.4689E+02	1.1472E+04	9.1949E+02
7.6789E+02	1.3717E+03	1.3344E+05	1.7167E+04	1.3171E+05	6.9146E-01	9.4689E+02	1.0994E+04	2.6479E+03
7.6789E+02	1.3145E+03	1.3253E+05	1.7167E+04	1.2513E+05	1.3165E+00	9.4689E+02	1.0516E+04	4.4906E+03
7.6789E+02	1.2574E+03	2.7335E+05	1.7167E+04	1.1854E+05	1.2500E+00	9.4689E+02	1.0038E+04	4.7544E+03
7.6789E+02	1.2002E+03	4.6771E+05	1.7167E+04	1.1196E+05	6.2500E-01	9.4689E+02	9.5603E+03	1.7917E+04
7.6789E+02	1.1431E+03	5.6162E+05	1.7167E+04	1.0537E+05	2.3750E+00	9.4689E+02	9.0823E+03	3.7986E+04
7.6789E+02	1.0859E+03	7.8620E+05	1.7167E+04	9.8784E+04	1.7500E+00	9.4689E+02	8.6042E+03	2.8305E+04
7.6789E+02	1.0288E+03	1.0156E+06	1.7167E+04	9.2199E+04	1.5589E+01	9.4689E+02	8.1262E+03	6.6415E+04
7.6789E+02	9.7160E+02	1.3006E+06	1.7167E+04	8.5613E+04	1.5383E+01	9.4689E+02	7.6482E+03	8.7930E+04
7.6789E+02	9.1445E+02	1.7664E+06	1.7167E+04	7.9027E+04	5.8172E+01	9.4689E+02	7.1702E+03	1.2270E+05
7.6789E+02	8.5729E+02	2.2129E+06	1.7167E+04	7.2442E+04	4.0170E+01	9.4689E+02	6.6922E+03	2.5134E+05
7.6789E+02	8.0014E+02	2.9785E+06	1.7167E+04	6.5856E+04	9.6084E+01	9.4689E+02	6.2142E+03	3.4413E+05
7.6789E+02	7.4299E+02	3.3267E+06	1.7167E+04	5.9270E+04	2.0065E+02	9.4689E+02	5.7362E+03	6.1398E+05
7.6789E+02	6.8584E+02	4.4946E+06	1.7167E+04	5.2685E+04	2.2136E+03	9.4689E+02	5.2581E+03	8.4714E+05
7.6789E+02	6.2868E+02	5.3001E+06	1.7167E+04	4.6099E+04	4.4469E+03	9.4689E+02	4.7801E+03	1.0308E+06
7.6789E+02	5.7153E+02	6.3467E+06	1.7167E+04	3.9514E+04	4.7534E+03	9.4689E+02	4.3021E+03	1.4333E+06
7.6789E+02	5.1438E+02	7.0138E+06	1.7167E+04	3.2928E+04	3.0625E+02	9.4689E+02	3.8241E+03	2.3147E+06
7.6789E+02	4.5722E+02	7.8383E+06	1.7167E+04	2.6342E+04	4.9542E+03	9.4689E+02	3.3461E+03	2.6071E+06
7.6789E+02	4.0007E+02	7.9784E+06	1.7167E+04	1.9757E+04	1.7900E+04	9.4689E+02	2.8681E+03	3.6933E+06
7.6789E+02	3.4292E+02	7.2317E+06	1.7167E+04	1.3171E+04	1.4352E+04	9.4689E+02	2.3901E+03	4.7103E+06
7.6789E+02	2.8576E+02	7.2362E+06	1.7167E+04	6.5856E+03	1.7621E+05	9.4689E+02	1.9121E+03	5.3625E+06
7.6789E+02	2.2861E+02	5.8626E+06	1.7167E+04	0.0000E+00	1.0186E+06	9.4689E+02	1.4340E+03	6.1941E+06
7.6789E+02	1.7146E+02	5.2937E+06	9.5802E+03	1.6464E+05	6.2500E-01	9.4689E+02	9.5603E+02	6.9702E+06
7.6789E+02	1.1431E+02	8.2832E+06	9.5802E+03	1.5805E+05	1.6696E+00	9.4689E+02	4.7801E+02	1.5533E+07
7.6789E+02	5.7153E+01	2.3277E+07	9.5802E+03	1.5147E+05	6.6460E-02	9.4689E+02	0.0000E+00	3.4989E+07
7.6789E+02	0.0000E+00	3.2143E+07	9.5802E+03	1.4488E+05	1.7361E+00	4.0640E+02	1.6252E+04	2.1230E+00
7.0232E+02	2.4004E+03	1.7691E+02	9.5802E+03	1.3830E+05	5.0088E+00	4.0640E+02	1.5774E+04	2.1285E+00
7.0232E+02	2.2861E+03	9.9805E+01	9.5802E+03	1.3171E+05	6.9146E-01	4.0640E+02	1.5296E+04	2.6034E+01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.0232E+02	2.2290E+03	5.0794E+01	9.5802E+03	1.2513E+05	4.2440E+00	4.0640E+02	1.4818E+04	2.5671E+02
7.0232E+02	2.1147E+03	1.9557E+03	9.5802E+03	1.1854E+05	3.3392E+00	4.0640E+02	1.4340E+04	4.6699E+02
7.0232E+02	2.0575E+03	2.4804E+03	9.5802E+03	1.1196E+05	6.2500E-01	4.0640E+02	1.3862E+04	6.5704E+02
7.0232E+02	2.0004E+03	5.4120E+02	9.5802E+03	1.0537E+05	7.3551E+03	4.0640E+02	1.3384E+04	4.2763E+03
7.0232E+02	1.9432E+03	5.2768E+03	9.5802E+03	9.8784E+04	1.6214E+01	4.0640E+02	1.2906E+04	1.7246E+03
7.0232E+02	1.8860E+03	3.5276E+03	9.5802E+03	9.2199E+04	2.2075E+04	4.0640E+02	1.2428E+04	3.9653E+03
7.0232E+02	1.8289E+03	3.2536E+03	9.5802E+03	8.5613E+04	7.3712E+03	4.0640E+02	1.1950E+04	1.2063E+04
7.0232E+02	1.7717E+03	4.1160E+03	9.5802E+03	7.9027E+04	7.4508E+03	4.0640E+02	1.1472E+04	3.2283E+04
7.0232E+02	1.7146E+03	9.8367E+03	9.5802E+03	7.2442E+04	3.6866E+04	4.0640E+02	1.0994E+04	6.6065E+04
7.0232E+02	1.6574E+03	2.4913E+04	9.5802E+03	6.5856E+04	2.9615E+04	4.0640E+02	1.0516E+04	4.6227E+04
7.0232E+02	1.6003E+03	4.2419E+04	9.5802E+03	5.9270E+04	3.7031E+04	4.0640E+02	1.0038E+04	4.2490E+04
7.0232E+02	1.5431E+03	5.0569E+04	9.5802E+03	5.2685E+04	6.6565E+04	4.0640E+02	9.5603E+03	7.9490E+04
7.0232E+02	1.4860E+03	5.9373E+04	9.5802E+03	4.6099E+04	9.0927E+04	4.0640E+02	9.0823E+03	5.5759E+04
7.0232E+02	1.4288E+03	1.1163E+05	9.5802E+03	3.9514E+04	7.0852E+04	4.0640E+02	8.6042E+03	6.3123E+04
7.0232E+02	1.3717E+03	1.4530E+05	9.5802E+03	3.2928E+04	5.6561E+04	4.0640E+02	8.1262E+03	1.4559E+05
7.0232E+02	1.3145E+03	1.4720E+05	9.5802E+03	2.6342E+04	2.2296E+05	4.0640E+02	7.6482E+03	1.7503E+05
7.0232E+02	1.2574E+03	2.0816E+05	9.5802E+03	1.9757E+04	2.3473E+05	4.0640E+02	7.1702E+03	2.3466E+05
7.0232E+02	1.2002E+03	2.8434E+05	9.5802E+03	1.3171E+04	4.1606E+05	4.0640E+02	6.6922E+03	3.2978E+05
7.0232E+02	1.1431E+03	3.1275E+05	9.5802E+03	6.5856E+03	1.4541E+06	4.0640E+02	6.2142E+03	4.9972E+05
7.0232E+02	1.0859E+03	4.5229E+05	9.5802E+03	0.0000E+00	7.8021E+06	4.0640E+02	5.7362E+03	7.3342E+05
7.0232E+02	1.0288E+03	6.8462E+05	1.9936E+03	3.2928E+05	1.6696E+00	4.0640E+02	5.2581E+03	9.8363E+05
7.0232E+02	9.7160E+02	8.4720E+05	1.9936E+03	2.9635E+05	1.6696E+00	4.0640E+02	4.7801E+03	1.5248E+06
7.0232E+02	9.1445E+02	1.2753E+06	1.9936E+03	2.0415E+05	1.3292E-01	4.0640E+02	4.3021E+03	1.8621E+06
7.0232E+02	8.5729E+02	1.5499E+06	1.9936E+03	1.9098E+05	6.6460E-02	4.0640E+02	3.8241E+03	2.5575E+06
7.0232E+02	8.0014E+02	2.0877E+06	1.9936E+03	1.8440E+05	6.6460E-02	4.0640E+02	3.3461E+03	3.2437E+06
7.0232E+02	7.4299E+02	2.6342E+06	1.9936E+03	1.6464E+05	6.6460E-02	4.0640E+02	2.8681E+03	4.3724E+06
7.0232E+02	6.8584E+02	3.6627E+06	1.9936E+03	1.5805E+05	6.6460E-02	4.0640E+02	2.3901E+03	6.2791E+06
7.0232E+02	6.2868E+02	4.1950E+06	1.9936E+03	1.5147E+05	6.6460E-02	4.0640E+02	1.9121E+03	8.0023E+06
7.0232E+02	5.7153E+02	5.0011E+06	1.9936E+03	1.4488E+05	1.3292E-01	4.0640E+02	1.4340E+03	8.8760E+06
7.0232E+02	5.1438E+02	5.7881E+06	1.9936E+03	1.3830E+05	2.6584E-01	4.0640E+02	9.5603E+02	1.0346E+07
7.0232E+02	4.5722E+02	6.2217E+06	1.9936E+03	1.3171E+05	4.0307E+00	4.0640E+02	4.7801E+02	2.1937E+07
7.0232E+02	4.0007E+02	6.2756E+06	1.9936E+03	1.2513E+05	8.9084E-01	4.0640E+02	0.0000E+00	4.9106E+07
7.0232E+02	3.4292E+02	6.4824E+06	1.9936E+03	1.1854E+05	2.5604E+00	- 1.3408E+02	1.8165E+04	6.6460E-02
7.0232E+02	2.8576E+02	6.3538E+06	1.9936E+03	1.1196E+05	7.3564E+03	- 1.3408E+02	1.6730E+04	3.0439E+00
7.0232E+02	2.2861E+02	5.2976E+06	1.9936E+03	1.0537E+05	2.2056E+04	- 1.3408E+02	1.6252E+04	1.9442E-01
7.0232E+02	1.7146E+02	5.0093E+06	1.9936E+03	9.8784E+04	2.2063E+04	- 1.3408E+02	1.5774E+04	1.9442E-02

DNV

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
7.0232E+02	1.1431E+02	7.4622E+06	1.9936E+03	9.2199E+04	3.6826E+04	-	1.5296E+04	4.7443E+02
7.0232E+02	5.7153E+01	2.2832E+07	1.9936E+03	8.5613E+04	4.4141E+04	-	1.4818E+04	6.6776E+01
7.0232E+02	0.0000E+00	3.2855E+07	1.9936E+03	7.9027E+04	7.0457E+04	-	1.4340E+04	3.1960E+02
6.3675E+02	2.6290E+03	1.7691E+02	1.9936E+03	7.2442E+04	1.2515E+05	-	1.3862E+04	2.1336E+03
6.3675E+02	2.5719E+03	1.7691E+02	1.9936E+03	6.5856E+04	5.1839E+04	-	1.3384E+04	9.6311E+03
6.3675E+02	2.4576E+03	2.1323E+01	1.9936E+03	5.9270E+04	8.8785E+04	-	1.2906E+04	2.7174E+04
6.3675E+02	2.3433E+03	1.8279E+01	1.9936E+03	5.2685E+04	1.5712E+05	-	1.2428E+04	5.4991E+04
6.3675E+02	2.2861E+03	9.1395E+00	1.9936E+03	4.6099E+04	1.5623E+05	-	1.1950E+04	9.1976E+04
6.3675E+02	2.2290E+03	7.4947E+01	1.9936E+03	3.9514E+04	2.2318E+05	-	1.1472E+04	8.6148E+04
6.3675E+02	2.1718E+03	2.1297E+02	1.9936E+03	3.2928E+04	5.0485E+05	-	1.0994E+04	1.1617E+05
6.3675E+02	2.1147E+03	8.1256E+01	1.9936E+03	2.6342E+04	9.7025E+05	-	1.0516E+04	1.1526E+05
6.3675E+02	2.0575E+03	2.2880E+03	1.9936E+03	1.9757E+04	1.9948E+06	-	1.0038E+04	8.3745E+04
6.3675E+02	2.0004E+03	6.9756E+02	1.9936E+03	1.3171E+04	3.6260E+06	-	9.5603E+03	8.3743E+04
6.3675E+02	1.9432E+03	4.6083E+03	1.9936E+03	6.5856E+03	5.0578E+06	-	9.0823E+03	1.0864E+05
6.3675E+02	1.8860E+03	1.6649E+03	1.9936E+03	0.0000E+00	1.9655E+07	-	8.6042E+03	1.6001E+05
6.3675E+02	1.8289E+03	5.9518E+03	-	3.0952E+05	1.6696E+00	-	8.1262E+03	1.6065E+05
6.3675E+02	1.7717E+03	5.2364E+03	-	2.8318E+05	6.2500E-01	-	7.6482E+03	1.5828E+05
6.3675E+02	1.7146E+03	3.9704E+03	-	2.1074E+05	6.6460E-02	-	7.1702E+03	3.1419E+05
6.3675E+02	1.6574E+03	1.2288E+04	-	1.9757E+05	1.9938E-01	-	6.6922E+03	3.9200E+05
6.3675E+02	1.6003E+03	1.7370E+04	-	1.9098E+05	1.3292E-01	-	6.2142E+03	5.4257E+05
6.3675E+02	1.5431E+03	3.0475E+04	-	1.7781E+05	1.3292E-01	-	5.7362E+03	8.3809E+05
6.3675E+02	1.4860E+03	4.3429E+04	-	1.7123E+05	6.6460E-02	-	5.2581E+03	1.2361E+06
6.3675E+02	1.4288E+03	6.2659E+04	-	1.6464E+05	6.6460E-02	-	4.7801E+03	1.6423E+06
6.3675E+02	1.3717E+03	1.0696E+05	-	1.5147E+05	1.3292E-01	-	4.3021E+03	2.1911E+06
6.3675E+02	1.3145E+03	1.1320E+05	-	1.4488E+05	3.5386E+00	-	3.8241E+03	3.0447E+06
6.3675E+02	1.2574E+03	1.3816E+05	-	1.3830E+05	5.6338E+00	-	3.3461E+03	3.8832E+06
6.3675E+02	1.2002E+03	1.7081E+05	-	1.3171E+05	6.6460E-02	-	2.8681E+03	5.2537E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
6.3675E+02	1.1431E+03	2.8892E+05	-	1.2513E+05	5.7922E+00	-	2.3901E+03	7.7663E+06
6.3675E+02	1.0859E+03	3.7980E+05	-	1.1854E+05	1.3292E-01	-	1.9121E+03	9.0653E+06
6.3675E+02	1.0288E+03	5.5669E+05	-	1.1196E+05	3.1944E+01	-	1.4340E+03	1.1033E+07
6.3675E+02	9.7160E+02	7.3787E+05	-	1.0537E+05	6.0404E+01	-	9.5603E+02	1.1516E+07
6.3675E+02	9.1445E+02	8.9712E+05	-	9.8784E+04	2.5379E+01	-	4.7801E+02	2.4631E+07
6.3675E+02	8.5729E+02	1.1965E+06	-	9.2199E+04	7.2026E+01	-	0.0000E+00	5.5150E+07
6.3675E+02	8.0014E+02	1.5505E+06	-	8.5613E+04	2.1423E+03	-	1.8643E+04	1.0418E+02
6.3675E+02	7.4299E+02	1.9144E+06	-	7.9027E+04	1.4482E+02	-	1.6730E+04	6.6460E-02
6.3675E+02	6.8584E+02	2.4429E+06	-	7.2442E+04	2.6263E+02	-	1.6252E+04	2.3971E+01
6.3675E+02	6.2868E+02	2.8546E+06	-	6.5856E+04	1.3178E+03	-	1.5774E+04	3.0439E+00
6.3675E+02	5.7153E+02	3.6054E+06	-	5.9270E+04	3.9611E+02	-	1.5296E+04	2.0039E+01
6.3675E+02	5.1438E+02	3.9644E+06	-	5.2685E+04	1.4713E+04	-	1.4818E+04	3.5978E+01
6.3675E+02	4.5722E+02	4.6481E+06	-	4.6099E+04	3.7475E+04	-	1.4340E+04	1.6286E+03
6.3675E+02	4.0007E+02	5.0472E+06	-	3.9514E+04	9.7091E+04	-	1.3862E+04	2.6942E+03
6.3675E+02	3.4292E+02	4.9062E+06	-	3.2928E+04	2.8879E+05	-	1.3384E+04	7.5726E+03
6.3675E+02	2.8576E+02	4.8109E+06	-	2.6342E+04	6.2228E+05	-	1.2906E+04	2.1832E+04
6.3675E+02	2.2861E+02	4.4921E+06	-	1.9757E+04	1.4705E+06	-	1.2428E+04	4.1584E+04
6.3675E+02	1.7146E+02	4.4139E+06	-	1.3171E+04	2.1331E+06	-	1.1950E+04	7.6541E+04
6.3675E+02	1.1431E+02	6.7260E+06	-	6.5856E+03	3.6304E+06	-	1.1472E+04	7.2314E+04
6.3675E+02	5.7153E+01	1.9300E+07	-	0.0000E+00	1.1112E+07	-	1.0994E+04	1.0526E+05
6.3675E+02	0.0000E+00	3.1689E+07	-	3.2269E+05	1.6696E+00	-	1.0516E+04	6.8352E+04
5.7118E+02	2.6290E+03	3.0439E+00	-	3.0952E+05	1.6696E+00	-	1.0038E+04	8.2225E+04
5.7118E+02	2.4576E+03	1.0285E+02	-	2.8318E+05	1.6696E+00	-	9.5603E+03	9.3028E+04
5.7118E+02	2.3433E+03	1.2183E+01	-	2.6342E+05	1.7500E+00	-	9.0823E+03	1.3118E+05
5.7118E+02	2.2861E+03	3.6283E+01	-	2.3050E+05	1.7500E+00	-	8.6042E+03	1.0798E+05
5.7118E+02	2.2290E+03	2.1323E+01	-	2.1074E+05	1.8165E+00	-	8.1262E+03	1.8842E+05
5.7118E+02	2.1718E+03	2.1323E+01	-	2.0415E+05	6.9146E-01	-	7.6482E+03	1.2770E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.7118E+02	2.1147E+03	3.8149E+02	-	1.9757E+05	6.6460E-02	-	7.1702E+03	2.7163E+05
5.7118E+02	2.0575E+03	7.3400E+02	-	1.9098E+05	6.6460E-02	-	6.6922E+03	3.6877E+05
5.7118E+02	2.0004E+03	2.8405E+02	-	1.8440E+05	6.9146E-01	-	6.2142E+03	6.7665E+05
5.7118E+02	1.9432E+03	2.9772E+03	-	1.7781E+05	1.3292E-01	-	5.7362E+03	7.2830E+05
5.7118E+02	1.8860E+03	1.3519E+03	-	1.6464E+05	6.6460E-02	-	5.2581E+03	1.2244E+06
5.7118E+02	1.8289E+03	1.8717E+03	-	1.5805E+05	1.9938E-01	-	4.7801E+03	1.5127E+06
5.7118E+02	1.7717E+03	3.1835E+03	-	1.5147E+05	1.8025E+00	-	4.3021E+03	2.1123E+06
5.7118E+02	1.7146E+03	7.1473E+03	-	1.4488E+05	1.6696E+00	-	3.8241E+03	2.7449E+06
5.7118E+02	1.6574E+03	7.3387E+03	-	1.3830E+05	3.4721E+00	-	3.3461E+03	3.8107E+06
5.7118E+02	1.6003E+03	9.9794E+03	-	1.3171E+05	1.9452E+00	-	2.8681E+03	4.6205E+06
5.7118E+02	1.5431E+03	1.2083E+04	-	1.2513E+05	2.7564E-01	-	2.3901E+03	6.1671E+06
5.7118E+02	1.4860E+03	2.1415E+04	-	1.1854E+05	2.5373E-01	-	1.9121E+03	6.8737E+06
5.7118E+02	1.4288E+03	3.3355E+04	-	1.1196E+05	1.5423E+02	-	1.4340E+03	7.3115E+06
5.7118E+02	1.3717E+03	4.4837E+04	-	1.0537E+05	6.5859E+01	-	9.5603E+02	8.9723E+06
5.7118E+02	1.3145E+03	6.5146E+04	-	9.8784E+04	4.6493E+03	-	4.7801E+02	1.9557E+07
5.7118E+02	1.2574E+03	8.3792E+04	-	9.2199E+04	3.9431E+02	-	0.0000E+00	4.2989E+07
5.7118E+02	1.2002E+03	1.1450E+05	-	8.5613E+04	1.3872E+03	-	1.7208E+04	3.0439E+00
5.7118E+02	1.1431E+03	1.7156E+05	-	7.9027E+04	2.3348E+03	-	1.6252E+04	1.3392E+00
5.7118E+02	1.0859E+03	2.2416E+05	-	7.2442E+04	3.1967E+03	-	1.5774E+04	2.7474E+00
5.7118E+02	1.0288E+03	2.5290E+05	-	6.5856E+04	1.1768E+04	-	1.5296E+04	1.1087E+02
5.7118E+02	9.7160E+02	4.1206E+05	-	5.9270E+04	2.3938E+04	-	1.4818E+04	3.7020E+02
5.7118E+02	9.1445E+02	4.7229E+05	-	5.2685E+04	3.1550E+04	-	1.4340E+04	1.2873E+02
5.7118E+02	8.5729E+02	6.4964E+05	-	4.6099E+04	7.3114E+04	-	1.3862E+04	1.5509E+03
5.7118E+02	8.0014E+02	7.8353E+05	-	3.9514E+04	2.0775E+05	-	1.3384E+04	3.0219E+03
5.7118E+02	7.4299E+02	9.2244E+05	-	3.2928E+04	4.5896E+05	-	1.2906E+04	6.3296E+03
5.7118E+02	6.8584E+02	1.2782E+06	-	2.6342E+04	1.0138E+06	-	1.2428E+04	9.8738E+03
5.7118E+02	6.2868E+02	1.5435E+06	-	1.9757E+04	1.7069E+06	-	1.1950E+04	9.8598E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.7118E+02	5.7153E+02	1.9519E+06	-	1.3171E+04	2.1967E+06	-	1.1472E+04	1.9271E+04
5.7118E+02	5.1438E+02	2.2150E+06	-	6.5856E+03	4.7596E+06	-	1.0994E+04	3.5605E+04
5.7118E+02	4.5722E+02	2.9233E+06	-	0.0000E+00	1.1795E+07	-	1.0516E+04	4.3742E+04
5.7118E+02	4.0007E+02	2.9699E+06	-	3.0952E+05	1.6696E+00	-	1.0038E+04	5.4022E+04
5.7118E+02	3.4292E+02	3.3318E+06	-	3.0294E+05	3.4196E+00	-	9.5603E+03	8.6315E+04
5.7118E+02	2.8576E+02	3.7482E+06	-	2.9635E+05	1.6696E+00	-	9.0823E+03	9.7094E+04
5.7118E+02	2.2861E+02	4.0895E+06	-	2.8977E+05	1.6696E+00	-	8.6042E+03	9.9406E+04
5.7118E+02	1.7146E+02	3.8476E+06	-	2.8318E+05	6.7588E+00	-	8.1262E+03	1.4743E+05
5.7118E+02	1.1431E+02	5.7290E+06	-	2.7660E+05	3.5000E+00	-	7.6482E+03	1.7310E+05
5.7118E+02	5.7153E+01	1.8161E+07	-	2.7001E+05	5.2500E+00	-	7.1702E+03	2.5761E+05
5.7118E+02	0.0000E+00	3.3195E+07	-	2.6342E+05	5.3165E+00	-	6.6922E+03	3.9563E+05
5.0561E+02	2.4004E+03	1.2033E+00	-	2.5684E+05	3.5000E+00	-	6.2142E+03	5.1580E+05
5.0561E+02	2.3433E+03	3.0439E+00	-	2.5025E+05	3.5000E+00	-	5.7362E+03	7.4777E+05
5.0561E+02	2.2861E+03	1.8300E+02	-	2.2391E+05	6.9146E-01	-	5.2581E+03	9.0318E+05
5.0561E+02	2.2290E+03	4.5423E+01	-	2.1074E+05	1.3292E-01	-	4.7801E+03	1.4546E+06
5.0561E+02	2.1718E+03	6.9790E+01	-	1.9098E+05	1.3292E-01	-	4.3021E+03	1.8165E+06
5.0561E+02	2.1147E+03	2.4939E+01	-	1.7781E+05	6.6460E-02	-	3.8241E+03	2.3651E+06
5.0561E+02	2.0575E+03	2.7994E+03	-	1.7123E+05	6.6460E-02	-	3.3461E+03	3.0583E+06
5.0561E+02	2.0004E+03	3.6771E+02	-	1.6464E+05	1.3292E-01	-	2.8681E+03	3.4742E+06
5.0561E+02	1.9432E+03	4.3496E+02	-	1.5805E+05	6.9146E-01	-	2.3901E+03	4.0023E+06
5.0561E+02	1.8860E+03	5.0234E+02	-	1.5147E+05	1.2820E+01	-	1.9121E+03	4.3333E+06
5.0561E+02	1.8289E+03	1.6028E+03	-	1.4488E+05	4.0856E-01	-	1.4340E+03	4.8984E+06
5.0561E+02	1.7717E+03	3.8518E+03	-	1.3830E+05	1.0693E+02	-	9.5603E+02	6.0046E+06
5.0561E+02	1.7146E+03	2.0901E+03	-	1.3171E+05	1.0673E+02	-	4.7801E+02	1.4137E+07
5.0561E+02	1.6574E+03	2.9651E+03	-	1.2513E+05	1.0617E+02	-	0.0000E+00	3.0690E+07
5.0561E+02	1.6003E+03	3.8535E+03	-	1.1854E+05	1.2113E+02	-	1.7208E+04	6.6460E-02
5.0561E+02	1.5431E+03	9.9837E+03	-	1.1196E+05	7.0761E+01	-	1.6730E+04	9.2000E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
5.0561E+02	1.4860E+03	8.4479E+03	-	1.0537E+05	2.3264E+03	-	1.6252E+04	6.2500E-01
5.0561E+02	1.4288E+03	1.0673E+04	-	9.8784E+04	3.8866E+02	-	1.5774E+04	3.0439E+00
5.0561E+02	1.3717E+03	2.0177E+04	-	9.2199E+04	3.3308E+02	-	1.5296E+04	2.2427E-01
5.0561E+02	1.3145E+03	2.5536E+04	-	8.5613E+04	1.2266E+02	-	1.4818E+04	3.1704E+00
5.0561E+02	1.2574E+03	3.1794E+04	-	7.9027E+04	5.3986E+03	-	1.4340E+04	6.3636E+01
5.0561E+02	1.2002E+03	6.2820E+04	-	7.2442E+04	6.4049E+03	-	1.3862E+04	2.1652E+02
5.0561E+02	1.1431E+03	5.3603E+04	-	6.5856E+04	1.1305E+04	-	1.3384E+04	1.1545E+02
5.0561E+02	1.0859E+03	5.9836E+04	-	5.9270E+04	2.4195E+04	-	1.2906E+04	7.6302E+02
5.0561E+02	1.0288E+03	1.1911E+05	-	5.2685E+04	4.4838E+04	-	1.2428E+04	4.0565E+02
5.0561E+02	9.7160E+02	1.2821E+05	-	4.6099E+04	5.9299E+04	-	1.1950E+04	1.8182E+03
5.0561E+02	9.1445E+02	1.6643E+05	-	3.9514E+04	2.5924E+05	-	1.1472E+04	5.0030E+03
5.0561E+02	8.5729E+02	2.2699E+05	-	3.2928E+04	6.9126E+05	-	1.0994E+04	9.5468E+03
5.0561E+02	8.0014E+02	2.6196E+05	-	2.6342E+04	2.0617E+06	-	1.0516E+04	1.5171E+04
5.0561E+02	7.4299E+02	3.2834E+05	-	1.9757E+04	4.9199E+06	-	1.0038E+04	1.0876E+04
5.0561E+02	6.8584E+02	4.4620E+05	-	1.3171E+04	7.3273E+06	-	9.5603E+03	3.5809E+04
5.0561E+02	6.2868E+02	4.8142E+05	-	6.5856E+03	1.2621E+07	-	9.0823E+03	3.9966E+04
5.0561E+02	5.7153E+02	6.0211E+05	-	0.0000E+00	2.7153E+07	-	8.6042E+03	5.1668E+04
5.0561E+02	5.1438E+02	7.5324E+05	-	3.1611E+05	1.6696E+00	-	8.1262E+03	7.4440E+04
5.0561E+02	4.5722E+02	8.1374E+05	-	2.9635E+05	3.3392E+00	-	7.6482E+03	1.0828E+05
5.0561E+02	4.0007E+02	1.4351E+06	-	2.8977E+05	6.5105E+00	-	7.1702E+03	1.6915E+05
5.0561E+02	3.4292E+02	2.3586E+06	-	2.8318E+05	8.2605E+00	-	6.6922E+03	3.4146E+05
5.0561E+02	2.8576E+02	3.7217E+06	-	2.7660E+05	8.5892E+00	-	6.2142E+03	4.3971E+05
5.0561E+02	2.2861E+02	4.6100E+06	-	2.7001E+05	6.9196E+00	-	5.7362E+03	6.7087E+05
5.0561E+02	1.7146E+02	5.4129E+06	-	2.6342E+05	9.9301E+00	-	5.2581E+03	8.6620E+05
5.0561E+02	1.1431E+02	7.3339E+06	-	2.5684E+05	8.7500E+00	-	4.7801E+03	1.2588E+06
5.0561E+02	5.7153E+01	2.0928E+07	-	2.5025E+05	2.3750E+00	-	4.3021E+03	1.5231E+06
5.0561E+02	0.0000E+00	4.0741E+07	-	2.4367E+05	6.9146E-01	-	3.8241E+03	1.0720E+06

Document:
0122-8671 VER 00Description:
Foundation loads – EV162-6.8/7.2MW HH169m HA2A90APage
262/282

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.4003E+02	2.5719E+03	8.9160E+00	-	2.3050E+05	2.3750E+00	-	3.3461E+03	2.3544E+06
4.4003E+02	2.4576E+03	1.6696E+00	-	2.2391E+05	1.2500E+00	-	2.8681E+03	2.8065E+06
4.4003E+02	2.3433E+03	6.5105E+00	-	2.1733E+05	6.2500E-01	-	2.3901E+03	2.9655E+06
4.4003E+02	2.2861E+03	2.5920E+02	-	2.0415E+05	6.6460E-02	-	1.9121E+03	3.2306E+06
4.4003E+02	2.2290E+03	4.7135E+00	-	1.9757E+05	6.6460E-02	-	1.4340E+03	2.7887E+06
4.4003E+02	2.1718E+03	1.7500E+00	-	1.8440E+05	1.3292E-01	-	9.5603E+02	4.2298E+06
4.4003E+02	2.1147E+03	4.2820E+01	-	1.7781E+05	6.2500E-01	-	4.7801E+02	1.0318E+07
4.4003E+02	2.0575E+03	5.0260E+01	-	1.7123E+05	2.6584E-01	-	0.0000E+00	2.0137E+07
4.4003E+02	2.0004E+03	1.0955E+02	-	1.6464E+05	1.3292E-01	-	2.0077E+04	6.6460E-02
4.4003E+02	1.9432E+03	1.8345E+01	-	1.5805E+05	9.0489E+00	-	1.8643E+04	6.6460E-02
4.4003E+02	1.8860E+03	3.7350E+02	-	1.5147E+05	9.0694E+00	-	1.7208E+04	3.5593E-01
4.4003E+02	1.8289E+03	4.9306E+02	-	1.4488E+05	1.5444E+01	-	1.6252E+04	3.2607E-01
4.4003E+02	1.7717E+03	2.8381E+02	-	1.3830E+05	1.5541E+01	-	1.5774E+04	9.7859E+00
4.4003E+02	1.7146E+03	5.6510E+03	-	1.3171E+05	7.3112E+00	-	1.5296E+04	9.2358E+00
4.4003E+02	1.6574E+03	1.3319E+03	-	1.2513E+05	2.2146E+01	-	1.4818E+04	2.1270E+02
4.4003E+02	1.6003E+03	1.2291E+03	-	1.1854E+05	1.2091E+01	-	1.4340E+04	2.9029E+00
4.4003E+02	1.5431E+03	2.4069E+03	-	1.1196E+05	4.8935E+01	-	1.3862E+04	8.3878E+00
4.4003E+02	1.4860E+03	1.1295E+03	-	1.0537E+05	1.1502E+03	-	1.3384E+04	4.0671E+00
4.4003E+02	1.4288E+03	7.5897E+03	-	9.8784E+04	2.2576E+02	-	1.2906E+04	1.6686E+01
4.4003E+02	1.3717E+03	1.4025E+04	-	9.2199E+04	5.3232E+02	-	1.2428E+04	2.4692E+02
4.4003E+02	1.3145E+03	6.0506E+03	-	8.5613E+04	3.6539E+03	-	1.1950E+04	5.8506E+02
4.4003E+02	1.2574E+03	7.1727E+03	-	7.9027E+04	5.3487E+03	-	1.1472E+04	5.1730E+02
4.4003E+02	1.2002E+03	1.2461E+04	-	7.2442E+04	2.4014E+04	-	1.0994E+04	6.6312E+02
4.4003E+02	1.1431E+03	1.6536E+04	-	6.5856E+04	1.3532E+04	-	1.0516E+04	1.0665E+03
4.4003E+02	1.0859E+03	2.3680E+04	-	5.9270E+04	3.8270E+04	-	1.0038E+04	1.2528E+03
4.4003E+02	1.0288E+03	3.0385E+04	-	5.2685E+04	7.9631E+04	-	9.5603E+03	3.6731E+03
4.4003E+02	9.7160E+02	3.4722E+04	-	4.6099E+04	1.3134E+05	-	9.0823E+05	1.0499E+03

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.4003E+02	9.1445E+02	4.4180E+04	-	3.9514E+04	2.4301E+05	-	8.6042E+03	1.2221E+04
4.4003E+02	8.5729E+02	3.6687E+04	-	3.2928E+04	5.7887E+05	-	8.1262E+03	4.4211E+04
4.4003E+02	8.0014E+02	7.6700E+04	-	2.6342E+04	1.5359E+06	-	7.6482E+03	6.0425E+04
4.4003E+02	7.4299E+02	8.5879E+04	-	1.9757E+04	4.3526E+06	-	7.1702E+03	1.4130E+05
4.4003E+02	6.8584E+02	7.0675E+04	-	1.3171E+04	7.6421E+06	-	6.6922E+03	1.9334E+05
4.4003E+02	6.2868E+02	1.3307E+05	-	6.5856E+03	1.4183E+07	-	6.2142E+03	2.9240E+05
4.4003E+02	5.7153E+02	1.4757E+05	-	0.0000E+00	2.8595E+07	-	5.7362E+03	3.9720E+05
4.4003E+02	5.1438E+02	2.5392E+05	-	3.0952E+05	1.6696E+00	-	5.2581E+03	5.4724E+05
4.4003E+02	4.5722E+02	4.8927E+05	-	3.0294E+05	1.7500E+00	-	4.7801E+03	7.8848E+05
4.4003E+02	4.0007E+02	9.8270E+05	-	2.9635E+05	5.0892E+00	-	4.3021E+03	1.1425E+06
4.4003E+02	3.4292E+02	1.8656E+06	-	2.8318E+05	5.0088E+00	-	3.8241E+03	1.5191E+06
4.4003E+02	2.8576E+02	3.5770E+06	-	2.7660E+05	1.6850E+01	-	3.3461E+03	1.6751E+06
4.4003E+02	2.2861E+02	5.4488E+06	-	2.7001E+05	5.0892E+00	-	2.8681E+03	2.1137E+06
4.4003E+02	1.7146E+02	8.1034E+06	-	2.6342E+05	2.3427E+01	-	2.3901E+03	1.9810E+06
4.4003E+02	1.1431E+02	9.5957E+06	-	2.5684E+05	6.2500E-01	-	1.9121E+03	1.9188E+06
4.4003E+02	5.7153E+01	2.1137E+07	-	2.5025E+05	1.6521E+01	-	1.4340E+03	1.9699E+06
4.4003E+02	0.0000E+00	4.5471E+07	-	2.4367E+05	2.3750E+00	-	9.5603E+02	3.1568E+06
3.7446E+02	2.4576E+03	6.6460E-02	-	2.3708E+05	1.7500E+00	-	4.7801E+02	7.0285E+06
3.7446E+02	2.2290E+03	6.5105E+00	-	2.2391E+05	1.2500E+00	-	0.0000E+00	1.3919E+07
3.7446E+02	2.1718E+03	3.7354E+00	-	2.1074E+05	2.5079E+00	-	2.1511E+04	6.6460E-02
3.7446E+02	2.1147E+03	1.0245E+02	-	2.0415E+05	3.5000E+00	-	2.0555E+04	6.6460E-02
3.7446E+02	2.0575E+03	1.9945E+02	-	1.9757E+05	7.5792E-01	-	1.6252E+04	9.6319E-02
3.7446E+02	2.0004E+03	5.6960E+02	-	1.9098E+05	6.2500E-01	-	1.5774E+04	4.6392E+00
3.7446E+02	1.9432E+03	8.0252E+01	-	1.8440E+05	6.6460E-02	-	1.5296E+04	1.0708E+00
3.7446E+02	1.8860E+03	3.8852E+02	-	1.7781E+05	6.2500E-01	-	1.4818E+04	1.6282E+00
3.7446E+02	1.8289E+03	7.9518E+01	-	1.7123E+05	1.6467E+01	-	1.4340E+04	2.5751E+00
3.7446E+02	1.7717E+03	7.5751E+01	-	1.6464E+05	6.2500E-01	-	1.3862E+04	2.5751E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.7446E+02	1.7146E+03	6.0955E+01	-	1.5805E+05	1.3870E+01	-	1.3384E+04	2.6435E+00
3.7446E+02	1.6574E+03	1.1712E+03	-	1.5147E+05	2.7519E+00	-	1.2906E+04	2.2959E+01
3.7446E+02	1.6003E+03	2.2685E+02	-	1.4488E+05	1.4813E+01	-	1.2428E+04	2.9086E+00
3.7446E+02	1.5431E+03	2.0724E+02	-	1.3830E+05	2.9394E+00	-	1.1950E+04	4.2695E+01
3.7446E+02	1.4860E+03	5.7308E+02	-	1.3171E+05	1.0819E+02	-	1.1472E+04	7.6746E+00
3.7446E+02	1.4288E+03	1.9550E+02	-	1.2513E+05	1.4359E+01	-	1.0994E+04	5.7859E+00
3.7446E+02	1.3717E+03	6.5829E+02	-	1.1854E+05	2.4945E+02	-	1.0516E+04	8.0077E+01
3.7446E+02	1.3145E+03	9.3046E+02	-	1.1196E+05	3.5401E+02	-	1.0038E+04	1.9902E+02
3.7446E+02	1.2574E+03	1.1928E+03	-	1.0537E+05	3.9252E+02	-	9.5603E+03	6.5697E+02
3.7446E+02	1.2002E+03	2.2467E+03	-	9.8784E+04	5.1929E+02	-	9.0823E+03	9.6385E+02
3.7446E+02	1.1431E+03	2.8403E+03	-	9.2199E+04	2.2472E+03	-	8.6042E+03	2.4136E+03
3.7446E+02	1.0859E+03	7.6680E+03	-	8.5613E+04	3.7949E+03	-	8.1262E+03	4.6002E+03
3.7446E+02	1.0288E+03	5.3090E+03	-	7.9027E+04	1.8860E+03	-	7.6482E+03	2.5469E+04
3.7446E+02	9.7160E+02	1.0898E+04	-	7.2442E+04	9.1242E+03	-	7.1702E+03	2.0645E+04
3.7446E+02	9.1445E+02	1.0249E+04	-	6.5856E+04	1.3248E+04	-	6.6922E+03	7.5864E+04
3.7446E+02	8.5729E+02	2.5000E+04	-	5.9270E+04	5.6174E+03	-	6.2142E+03	1.1570E+05
3.7446E+02	8.0014E+02	4.6073E+04	-	5.2685E+04	2.1195E+04	-	5.7362E+03	2.1481E+05
3.7446E+02	7.4299E+02	3.3211E+04	-	4.6099E+04	1.2502E+05	-	5.2581E+03	4.0654E+05
3.7446E+02	6.8584E+02	3.3155E+04	-	3.9514E+04	2.6944E+05	-	4.7801E+03	5.1021E+05
3.7446E+02	6.2868E+02	1.5937E+05	-	3.2928E+04	5.6974E+05	-	4.3021E+03	6.8219E+05
3.7446E+02	5.7153E+02	2.4564E+05	-	2.6342E+04	1.5098E+06	-	3.8241E+03	9.1223E+05
3.7446E+02	5.1438E+02	3.0218E+05	-	1.9757E+04	3.3209E+06	-	3.3461E+03	1.2156E+06
3.7446E+02	4.5722E+02	5.9874E+05	-	1.3171E+04	5.5030E+06	-	2.8681E+03	1.1968E+06
3.7446E+02	4.0007E+02	1.1367E+06	-	6.5856E+03	1.0179E+07	-	2.3901E+03	1.3665E+06
3.7446E+02	3.4292E+02	2.4385E+06	-	0.0000E+00	2.1266E+07	-	1.9121E+03	1.3940E+06
3.7446E+02	2.8576E+02	4.0978E+06	-	2.9635E+05	1.6696E+00	-	1.4340E+03	1.2594E+06
3.7446E+02	2.2861E+02	6.8310E+06	-	2.8977E+05	8.1801E+00	-	9.5603E+02	1.2149E+06

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.7446E+02	1.7146E+02	8.7187E+06	-	2.8318E+05	1.6696E+00	-	4.7801E+02	4.5828E+06
3.7446E+02	1.1431E+02	9.5594E+06	-	2.7660E+05	9.9301E+00	-	0.0000E+00	9.5097E+06
3.7446E+02	5.7153E+01	1.5023E+07	-	2.7001E+05	6.5770E+00	-	1.7208E+04	3.4251E+00
3.7446E+02	0.0000E+00	3.9516E+07	-	2.6342E+05	1.9780E+01	-	1.6730E+04	5.9719E-02
3.0889E+02	2.8005E+03	1.7500E+00	-	2.5684E+05	6.5105E+00	-	1.6252E+04	9.6319E-02
3.0889E+02	2.6290E+03	1.7500E+00	-	2.5025E+05	1.0010E+01	-	1.5296E+04	1.9442E-01
3.0889E+02	2.4576E+03	6.6460E-02	-	2.4367E+05	1.2880E+01	-	1.4818E+04	2.3174E+00
3.0889E+02	2.4004E+03	1.7500E+00	-	2.3708E+05	3.4196E+00	-	1.4340E+04	1.6282E+00
3.0889E+02	2.3433E+03	1.2500E+00	-	2.3050E+05	6.2500E-01	-	1.3862E+04	1.1224E+00
3.0889E+02	2.2861E+03	1.2255E+01	-	2.2391E+05	1.1291E+01	-	1.3384E+04	1.0502E+02
3.0889E+02	2.2290E+03	2.1535E+01	-	2.1074E+05	4.1915E+00	-	1.2906E+04	2.6025E+00
3.0889E+02	2.1718E+03	9.2657E+00	-	2.0415E+05	4.1600E+00	-	1.2428E+04	5.7393E+00
3.0889E+02	2.1147E+03	3.6448E+01	-	1.9757E+05	2.2161E+01	-	1.1950E+04	4.6049E-01
3.0889E+02	2.0575E+03	7.5446E+00	-	1.9098E+05	1.2620E+01	-	1.1472E+04	9.0491E-01
3.0889E+02	2.0004E+03	1.5836E+01	-	1.8440E+05	2.8536E+01	-	1.0994E+04	6.7434E+00
3.0889E+02	1.9432E+03	2.2598E+01	-	1.7781E+05	1.3706E+01	-	1.0516E+04	6.6795E+00
3.0889E+02	1.8860E+03	2.2225E+01	-	1.7123E+05	9.2722E+00	-	1.0038E+04	1.0756E+02
3.0889E+02	1.8289E+03	2.3749E+01	-	1.6464E+05	1.2885E+01	-	9.5603E+03	9.0861E+00
3.0889E+02	1.7717E+03	3.9694E+01	-	1.5805E+05	1.2318E+00	-	9.0823E+03	3.2286E+01
3.0889E+02	1.7146E+03	1.1803E+01	-	1.5147E+05	7.7660E-02	-	8.6042E+03	5.3875E+02
3.0889E+02	1.6574E+03	2.7521E+03	-	1.4488E+05	4.5529E-01	-	8.1262E+03	4.1724E+02
3.0889E+02	1.6003E+03	7.4105E+00	-	1.3830E+05	4.1089E+00	-	7.6482E+03	5.4353E+02
3.0889E+02	1.5431E+03	1.4834E+02	-	1.3171E+05	2.3947E+02	-	7.1702E+03	6.3813E+03
3.0889E+02	1.4860E+03	4.3783E+02	-	1.2513E+05	2.0267E+02	-	6.6922E+03	2.5119E+04
3.0889E+02	1.4288E+03	1.1331E+02	-	1.1854E+05	3.7345E+02	-	6.2142E+03	3.0608E+04
3.0889E+02	1.3717E+03	2.1711E+02	-	1.1196E+05	2.8736E+02	-	5.7362E+03	6.1782E+04
3.0889E+02	1.3145E+03	6.8915E+02	-	1.0537E+05	9.5470E+02	-	5.2581E+05	1.0102E+05

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
3.0889E+02	1.2574E+03	1.0874E+03	-	9.8784E+04	8.8037E+02	-	4.7801E+03	2.6064E+05
3.0889E+02	1.2002E+03	1.1691E+03	-	9.2199E+04	1.8073E+03	-	4.3021E+03	3.4920E+05
3.0889E+02	1.1431E+03	6.0142E+02	-	8.5613E+04	1.3556E+03	-	3.8241E+03	4.8461E+05
3.0889E+02	1.0859E+03	2.0342E+03	-	7.9027E+04	1.9875E+03	-	3.3461E+03	6.3923E+05
3.0889E+02	1.0288E+03	1.9410E+03	-	7.2442E+04	3.8563E+03	-	2.8681E+03	5.7931E+05
3.0889E+02	9.7160E+02	5.7793E+03	-	6.5856E+04	1.1318E+04	-	2.3901E+03	7.5428E+05
3.0889E+02	9.1445E+02	4.9392E+03	-	5.9270E+04	1.2925E+04	-	1.9121E+03	7.0848E+05
3.0889E+02	8.5729E+02	5.5455E+03	-	5.2685E+04	4.6687E+04	-	1.4340E+03	7.1295E+05
3.0889E+02	8.0014E+02	1.2080E+04	-	4.6099E+04	1.5352E+05	-	9.5603E+02	1.2442E+06
3.0889E+02	7.4299E+02	1.5780E+04	-	3.9514E+04	3.1171E+05	-	4.7801E+02	2.9133E+06
3.0889E+02	6.8584E+02	2.7107E+04	-	3.2928E+04	9.7349E+05	-	0.0000E+00	5.8140E+06
3.0889E+02	6.2868E+02	9.2165E+04	-	2.6342E+04	1.9512E+06	-	2.1033E+04	6.6460E-02
3.0889E+02	5.7153E+02	1.5919E+05	-	1.9757E+04	2.9741E+06	-	1.6252E+04	2.1230E+00
3.0889E+02	5.1438E+02	3.1006E+05	-	1.3171E+04	4.7553E+06	-	1.5296E+04	1.8327E-01
3.0889E+02	4.5722E+02	5.9900E+05	-	6.5856E+03	8.6779E+06	-	1.4340E+04	2.9860E-02
3.0889E+02	4.0007E+02	1.2796E+06	-	0.0000E+00	1.3545E+07	-	1.3862E+04	3.2607E-01
3.0889E+02	3.4292E+02	2.1525E+06	-	2.8318E+05	6.5105E+00	-	1.2906E+04	1.3292E-01
3.0889E+02	2.8576E+02	3.6343E+06	-	2.7660E+05	1.7500E+00	-	1.2428E+04	1.0081E+00
3.0889E+02	2.2861E+02	5.7646E+06	-	2.7001E+05	6.5105E+00	-	1.1472E+04	7.5792E-01
3.0889E+02	1.7146E+02	8.2692E+06	-	2.6342E+05	8.1801E+00	-	1.0994E+04	2.1299E+00
3.0889E+02	1.1431E+02	9.2187E+06	-	2.5025E+05	9.5410E+00	-	1.0516E+04	6.9146E-01
3.0889E+02	5.7153E+01	1.2525E+07	-	2.4367E+05	6.9057E+00	-	1.0038E+04	2.2946E+00
3.0889E+02	0.0000E+00	3.8105E+07	-	2.3708E+05	9.8497E+00	-	9.5603E+03	5.9317E-01
2.4332E+02	2.4576E+03	1.7361E+00	-	2.3050E+05	6.5105E+00	-	9.0823E+03	1.1844E+02
2.4332E+02	2.4004E+03	1.2336E+01	-	2.2391E+05	2.5103E+01	-	8.6042E+03	1.2336E+00
2.4332E+02	2.3433E+03	4.1250E+00	-	2.1733E+05	6.3584E+00	-	8.1262E+03	6.1296E+00
2.4332E+02	2.2861E+03	1.1600E+01	-	2.1074E+05	5.3270E+00	-	7.6482E+03	1.2514E+02

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.4332E+02	2.2290E+03	2.1796E+01	-	2.0415E+05	1.5680E+01	-	7.1702E+03	2.0578E+03
2.4332E+02	2.1718E+03	1.0143E+01	-	1.9757E+05	2.2630E+01	-	6.6922E+03	1.8452E+03
2.4332E+02	2.1147E+03	5.0892E+00	-	1.9098E+05	1.6843E+01	-	6.2142E+03	5.2864E+03
2.4332E+02	2.0575E+03	5.7807E+00	-	1.8440E+05	7.6150E+00	-	5.7362E+03	1.6803E+04
2.4332E+02	2.0004E+03	2.2368E+01	-	1.7781E+05	4.9391E+00	-	5.2581E+03	4.1209E+04
2.4332E+02	1.9432E+03	2.5880E+02	-	1.7123E+05	2.2659E+00	-	4.7801E+03	5.0885E+04
2.4332E+02	1.8860E+03	2.4717E+01	-	1.6464E+05	1.1558E+00	-	4.3021E+03	8.3741E+04
2.4332E+02	1.8289E+03	2.4765E+00	-	1.5805E+05	1.5499E+00	-	3.8241E+03	1.1015E+05
2.4332E+02	1.7717E+03	2.4024E+01	-	1.5147E+05	4.4551E-02	-	3.3461E+03	3.3426E+05
2.4332E+02	1.7146E+03	2.3139E+01	-	1.4488E+05	2.6604E+01	-	2.8681E+03	3.5213E+05
2.4332E+02	1.6574E+03	4.6509E+01	-	1.3830E+05	4.8991E+01	-	2.3901E+03	4.0874E+05
2.4332E+02	1.6003E+03	2.9634E+01	-	1.3171E+05	1.3213E+02	-	1.9121E+03	4.3455E+05
2.4332E+02	1.5431E+03	2.6278E+00	-	1.2513E+05	1.2534E+02	-	1.4340E+03	3.7371E+05
2.4332E+02	1.4860E+03	6.4032E+01	-	1.1854E+05	1.1791E+02	-	9.5603E+02	6.5408E+05
2.4332E+02	1.4288E+03	1.5402E+02	-	1.1196E+05	8.5224E+02	-	4.7801E+02	1.7349E+06
2.4332E+02	1.3717E+03	7.0460E+01	-	1.0537E+05	3.6363E+02	-	0.0000E+00	3.5311E+06
2.4332E+02	1.3145E+03	1.8830E+02	-	9.8784E+04	3.8251E+03	-	2.3901E+04	6.6460E-02
2.4332E+02	1.2574E+03	2.1459E+02	-	9.2199E+04	3.7611E+03	-	1.5774E+04	6.2500E-01
2.4332E+02	1.2002E+03	7.0575E+01	-	8.5613E+04	4.5629E+03	-	1.4818E+04	2.5000E+00
2.4332E+02	1.1431E+03	6.7493E+02	-	7.9027E+04	2.9242E+03	-	1.4340E+04	2.5000E+00
2.4332E+02	1.0859E+03	2.4458E+02	-	7.2442E+04	6.4494E+03	-	1.3862E+04	6.6460E-02
2.4332E+02	1.0288E+03	5.9054E+02	-	6.5856E+04	1.8565E+04	-	1.2428E+04	1.3292E-01
2.4332E+02	9.7160E+02	1.3825E+03	-	5.9270E+04	3.1240E+04	-	1.1472E+04	6.6460E-02
2.4332E+02	9.1445E+02	1.7316E+03	-	5.2685E+04	6.4509E+04	-	1.0994E+04	6.6460E-02
2.4332E+02	8.5729E+02	2.7091E+03	-	4.6099E+04	1.6878E+05	-	1.0516E+04	6.2500E-01
2.4332E+02	8.0014E+02	3.1054E+03	-	3.9514E+04	2.7713E+05	-	1.0038E+04	1.6696E+00
2.4332E+02	7.4299E+02	3.1915E+03	-	3.2928E+04	9.6075E+05	-	9.5603E+05	1.3292E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
2.4332E+02	6.8584E+02	8.4361E+03	-	2.6342E+04	1.8825E+06	-	9.0823E+03	2.3266E+00
2.4332E+02	6.2868E+02	2.6953E+04	-	1.9757E+04	3.2206E+06	-	8.6042E+03	1.1944E-01
2.4332E+02	5.7153E+02	6.8360E+04	-	1.3171E+04	5.3417E+06	-	8.1262E+03	7.1439E-01
2.4332E+02	5.1438E+02	1.3417E+05	-	6.5856E+03	9.1374E+06	-	7.6482E+03	5.4397E+00
2.4332E+02	4.5722E+02	3.9252E+05	-	0.0000E+00	1.1731E+07	-	7.1702E+03	4.2437E+00
2.4332E+02	4.0007E+02	6.8555E+05	-	2.7001E+05	1.6696E+00	-	6.6922E+03	1.5744E+02
2.4332E+02	3.4292E+02	1.4962E+06	-	2.5684E+05	3.3392E+00	-	6.2142E+03	3.6181E+01
2.4332E+02	2.8576E+02	2.9833E+06	-	2.5025E+05	9.9301E+00	-	5.7362E+03	2.4078E+02
2.4332E+02	2.2861E+02	5.4439E+06	-	2.4367E+05	1.1519E+01	-	5.2581E+03	1.3939E+02
2.4332E+02	1.7146E+02	8.5071E+06	-	2.3708E+05	3.3392E+00	-	4.7801E+03	2.2183E+03
2.4332E+02	1.1431E+02	1.1884E+07	-	2.3050E+05	1.3087E+01	-	4.3021E+03	2.9197E+04
2.4332E+02	5.7153E+01	1.7443E+07	-	2.2391E+05	1.6696E+00	-	3.8241E+03	9.8896E+03
2.4332E+02	0.0000E+00	4.8858E+07	-	2.1733E+05	8.1189E+00	-	3.3461E+03	2.5641E+04
1.7774E+02	2.4576E+03	3.3392E+00	-	2.1074E+05	1.1619E+01	-	2.8681E+03	6.9041E+04
1.7774E+02	2.4004E+03	3.3392E+00	-	2.0415E+05	2.3859E+01	-	2.3901E+03	1.3709E+05
1.7774E+02	2.2861E+03	6.6460E-02	-	1.9757E+05	2.0153E+01	-	1.9121E+03	1.1277E+05
1.7774E+02	2.2290E+03	1.8096E+01	-	1.9098E+05	9.4476E+00	-	1.4340E+03	1.5838E+05
1.7774E+02	2.1718E+03	1.7500E+00	-	1.8440E+05	3.2635E+01	-	9.5603E+02	2.2094E+05
1.7774E+02	2.1147E+03	3.5665E+00	-	1.7123E+05	3.0371E+00	-	4.7801E+02	6.0441E+05
1.7774E+02	2.0575E+03	4.2579E+00	-	1.6464E+05	3.0751E+00	-	0.0000E+00	2.0354E+06
1.7774E+02	2.0004E+03	4.3104E+00	-	1.5805E+05	3.6609E+01	-	1.9599E+04	6.6460E-02
1.7774E+02	1.9432E+03	3.1759E+01	-	1.5147E+05	2.9137E+01	-	1.4340E+04	1.3686E+00
1.7774E+02	1.8860E+03	1.8829E+00	-	1.4488E+05	1.8718E+00	-	1.3384E+04	1.5341E-01
1.7774E+02	1.8289E+03	5.5370E+01	-	1.3830E+05	2.3759E+02	-	1.1950E+04	3.0682E-01
1.7774E+02	1.7717E+03	1.5662E+01	-	1.3171E+05	9.1494E+02	-	1.1472E+04	1.6696E+00
1.7774E+02	1.7146E+03	4.2311E+00	-	1.2513E+05	9.8408E+01	-	9.0823E+03	1.3292E-01
1.7774E+02	1.6574E+03	4.9584E+01	-	1.1854E+05	6.8034E+03	-	8.6042E+03	1.3292E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.7774E+02	1.6003E+03	7.3106E-01	-	1.1196E+05	3.9105E+03	-	7.6482E+03	7.8506E-01
1.7774E+02	1.5431E+03	2.6404E+01	-	1.0537E+05	1.0700E+04	-	7.1702E+03	2.6042E+00
1.7774E+02	1.4860E+03	5.0456E+01	-	9.8784E+04	1.4119E+03	-	6.6922E+03	7.0277E+00
1.7774E+02	1.4288E+03	3.4898E+01	-	9.2199E+04	1.6114E+04	-	6.2142E+03	5.2604E+00
1.7774E+02	1.3717E+03	5.3791E+01	-	8.5613E+04	1.9304E+04	-	5.7362E+03	2.9210E+00
1.7774E+02	1.3145E+03	8.1626E+01	-	7.9027E+04	2.9312E+04	-	5.2581E+03	2.1391E+02
1.7774E+02	1.2574E+03	1.1256E+02	-	7.2442E+04	2.1620E+04	-	4.7801E+03	4.6319E+02
1.7774E+02	1.2002E+03	1.0794E+02	-	6.5856E+04	3.5038E+04	-	4.3021E+03	5.5393E+02
1.7774E+02	1.1431E+03	1.3672E+02	-	5.9270E+04	3.6091E+04	-	3.8241E+03	1.5064E+02
1.7774E+02	1.0859E+03	1.6675E+02	-	5.2685E+04	6.6881E+04	-	3.3461E+03	1.3697E+03
1.7774E+02	1.0288E+03	2.7380E+02	-	4.6099E+04	9.4598E+04	-	2.8681E+03	6.4103E+03
1.7774E+02	9.7160E+02	3.5130E+02	-	3.9514E+04	3.6234E+05	-	2.3901E+03	1.4855E+04
1.7774E+02	9.1445E+02	1.5595E+03	-	3.2928E+04	8.4337E+05	-	1.9121E+03	1.8811E+04
1.7774E+02	8.5729E+02	1.4057E+03	-	2.6342E+04	2.0007E+06	-	1.4340E+03	4.8688E+04
1.7774E+02	8.0014E+02	2.1845E+03	-	1.9757E+04	4.0590E+06	-	9.5603E+02	1.0345E+05
1.7774E+02	7.4299E+02	7.6577E+03	-	1.3171E+04	6.3836E+06	-	4.7801E+02	2.2680E+05
1.7774E+02	6.8584E+02	1.9361E+04	-	6.5856E+03	9.7019E+06	-	0.0000E+00	7.2837E+05
1.7774E+02	6.2868E+02	2.8768E+04	-	0.0000E+00	1.3357E+07	-	1.8165E+04	6.6460E-02
1.7774E+02	5.7153E+02	5.0770E+04	-	2.7001E+05	3.3392E+00	-	1.5296E+04	6.6460E-02
1.7774E+02	5.1438E+02	8.4939E+04	-	2.5684E+05	1.6696E+00	-	1.3862E+04	6.2500E-01
1.7774E+02	4.5722E+02	2.1253E+05	-	2.5025E+05	1.6696E+00	-	1.2906E+04	6.6460E-02
1.7774E+02	4.0007E+02	5.5362E+05	-	2.4367E+05	3.3392E+00	-	8.1262E+03	2.0901E+02
1.7774E+02	3.4292E+02	1.2494E+06	-	2.3708E+05	1.6696E+00	-	7.6482E+03	8.8395E-01
1.7774E+02	2.8576E+02	2.7700E+06	-	2.3050E+05	4.3951E+00	-	7.1702E+03	1.0374E+00
1.7774E+02	2.2861E+02	6.7008E+06	-	2.2391E+05	1.2033E+00	-	6.6922E+03	6.5214E-01
1.7774E+02	1.7146E+02	1.3018E+07	-	2.1733E+05	8.2059E+00	-	6.2142E+03	3.1344E+00
1.7774E+02	1.1431E+02	1.8378E+07	-	2.1074E+05	2.8789E+00	-	5.7362E+03	8.0114E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.7774E+02	5.7153E+01	2.8579E+07	-	2.0415E+05	5.0696E+00	-	5.2581E+03	4.1254E+00
1.7774E+02	0.0000E+00	6.9244E+07	-	1.9757E+05	8.0525E+00	-	4.7801E+03	2.0672E+01
1.1217E+02	2.8576E+03	6.6460E-02	-	1.9098E+05	2.5277E+01	-	4.3021E+03	2.4655E+02
1.1217E+02	2.7433E+03	6.6460E-02	-	1.8440E+05	2.6409E+01	-	3.8241E+03	1.2471E+01
1.1217E+02	2.4576E+03	1.8165E+00	-	1.7781E+05	7.9823E+00	-	3.3461E+03	4.4914E+02
1.1217E+02	2.3433E+03	3.4196E+00	-	1.7123E+05	2.7225E+01	-	2.8681E+03	2.8549E+01
1.1217E+02	2.2290E+03	1.7361E+00	-	1.6464E+05	4.2609E+01	-	2.3901E+03	2.1329E+03
1.1217E+02	2.1718E+03	1.3292E-01	-	1.5805E+05	7.7355E+00	-	1.9121E+03	1.5380E+03
1.1217E+02	2.1147E+03	1.4086E+01	-	1.5147E+05	2.8206E+01	-	1.4340E+03	4.8689E+03
1.1217E+02	2.0575E+03	6.2500E-01	-	1.4488E+05	3.5048E+02	-	9.5603E+02	6.3377E+03
1.1217E+02	1.9432E+03	1.9938E-01	-	1.3830E+05	3.6666E+02	-	4.7801E+02	6.0041E+04
1.1217E+02	1.8860E+03	6.6460E-02	-	1.3171E+05	5.9011E+02	-	0.0000E+00	1.8723E+05
1.1217E+02	1.8289E+03	1.7898E+01	-	1.2513E+05	2.2468E+02	-	1.6730E+04	6.6460E-02
1.1217E+02	1.7717E+03	1.3292E-01	-	1.1854E+05	4.0538E+03	-	1.5774E+04	6.6460E-02
1.1217E+02	1.7146E+03	1.9938E-01	-	1.1196E+05	7.3825E+02	-	7.6482E+03	1.3292E-01
1.1217E+02	1.6574E+03	1.8714E+01	-	1.0537E+05	5.2179E+03	-	5.7362E+03	3.3161E+00
1.1217E+02	1.6003E+03	1.9494E+00	-	9.8784E+04	1.3130E+04	-	5.2581E+03	4.4855E-01
1.1217E+02	1.5431E+03	1.8025E+00	-	9.2199E+04	9.6140E+03	-	4.7801E+03	8.5000E+00
1.1217E+02	1.4860E+03	7.8325E+01	-	8.5613E+04	1.4937E+04	-	4.3021E+03	4.2644E+00
1.1217E+02	1.4288E+03	4.5755E+01	-	7.9027E+04	2.3551E+04	-	3.8241E+03	1.8695E+00
1.1217E+02	1.3717E+03	6.1192E+01	-	7.2442E+04	2.9857E+04	-	3.3461E+03	1.1297E+01
1.1217E+02	1.3145E+03	5.9448E+01	-	6.5856E+04	2.9494E+04	-	2.8681E+03	3.2556E-01
1.1217E+02	1.2574E+03	7.9757E+01	-	5.9270E+04	3.6764E+04	-	2.3901E+03	3.5465E+01
1.1217E+02	1.2002E+03	1.4304E+02	-	5.2685E+04	3.1895E+04	-	1.9121E+03	1.4492E+03
1.1217E+02	1.1431E+03	1.7917E+02	-	4.6099E+04	8.4999E+04	-	1.4340E+03	4.9701E+02
1.1217E+02	1.0859E+03	1.9155E+02	-	3.9514E+04	1.5621E+05	-	9.5603E+02	1.1340E+02
1.1217E+02	1.0288E+03	2.2301E+02	-	3.2928E+04	3.7786E+05	-	4.7801E+02	2.1837E+04

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
1.1217E+02	9.7160E+02	4.2600E+02	-	2.6342E+04	1.2676E+06	-	0.0000E+00	4.2689E+04
1.1217E+02	9.1445E+02	3.1454E+02	-	1.9757E+04	2.9543E+06	-	1.0994E+04	1.3292E-01
1.1217E+02	8.5729E+02	3.1037E+03	-	1.3171E+04	5.3493E+06	-	7.6482E+03	9.6530E+00
1.1217E+02	8.0014E+02	1.8781E+03	-	6.5856E+03	7.9109E+06	-	6.2142E+03	1.9264E-01
1.1217E+02	7.4299E+02	4.8659E+03	-	0.0000E+00	1.4775E+07	-	5.7362E+03	1.0410E+00
1.1217E+02	6.8584E+02	8.2949E+03	-	2.4367E+05	1.6696E+00	-	5.2581E+03	6.2079E+00
1.1217E+02	6.2868E+02	2.2039E+04	-	2.3708E+05	3.3392E+00	-	4.7801E+03	3.3989E+00
1.1217E+02	5.7153E+02	3.9222E+04	-	2.1074E+05	2.7255E+00	-	4.3021E+03	1.3097E+00
1.1217E+02	5.1438E+02	5.3338E+04	-	2.0415E+05	1.0823E+01	-	3.8241E+03	5.0161E+00
1.1217E+02	4.5722E+02	1.5407E+05	-	1.9757E+05	2.0522E+01	-	3.3461E+03	4.5118E+00
1.1217E+02	4.0007E+02	4.4968E+05	-	1.9098E+05	5.3270E+00	-	2.8681E+03	3.8883E-01
1.1217E+02	3.4292E+02	9.0706E+05	-	1.8440E+05	3.0670E+01	-	2.3901E+03	6.5750E+00
1.1217E+02	2.8576E+02	2.0572E+06	-	1.7781E+05	1.1707E+01	-	1.9121E+03	7.2288E+00
1.1217E+02	2.2861E+02	3.6806E+06	-	1.7123E+05	2.8971E+01	-	1.4340E+03	3.3285E+00
1.1217E+02	1.7146E+02	6.6340E+06	-	1.6464E+05	1.7868E+02	-	9.5603E+02	5.4796E+00
1.1217E+02	1.1431E+02	1.0901E+07	-	1.5805E+05	6.6843E+00	-	4.7801E+02	1.5397E+03
1.1217E+02	5.7153E+01	1.6939E+07	-	1.5147E+05	3.0384E+02	-	0.0000E+00	2.1505E+03
1.1217E+02	0.0000E+00	4.9350E+07	-	1.4488E+05	3.0120E+02	-	1.8165E+04	6.6460E-02
4.6600E+01	2.7433E+03	6.2500E-01	-	1.3830E+05	7.9488E+01	-	1.6252E+04	1.3292E-01
4.6600E+01	2.4576E+03	1.6696E+00	-	1.3171E+05	6.4906E+01	-	6.6922E+03	1.3292E-01
4.6600E+01	2.3433E+03	6.6460E-02	-	1.2513E+05	8.7651E+02	-	4.7801E+03	3.0682E-01
4.6600E+01	2.2861E+03	3.4057E+00	-	1.1854E+05	5.6792E+02	-	4.3021E+03	6.4119E-01
4.6600E+01	2.2290E+03	3.4861E+00	-	1.1196E+05	6.0276E+03	-	3.8241E+03	7.8506E-01
4.6600E+01	2.1147E+03	6.6460E-02	-	1.0537E+05	1.5862E+03	-	3.3461E+03	1.3292E-01
4.6600E+01	2.0575E+03	1.7500E+00	-	9.8784E+04	5.2735E+03	-	2.8681E+03	7.7766E-01
4.6600E+01	2.0004E+03	6.6460E-02	-	9.2199E+04	1.4728E+04	-	2.3901E+03	9.4133E+00
4.6600E+01	1.8860E+03	6.6460E-02	-	8.5613E+04	6.5097E+03	-	1.9121E+05	1.3292E-01

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6600E+01	1.8289E+03	1.9938E-01	-	7.9027E+04	2.8377E+04	-	1.4340E+03	5.3002E+00
4.6600E+01	1.7146E+03	1.7500E+00	-	7.2442E+04	2.4965E+04	-	9.5603E+02	9.4549E+00
4.6600E+01	1.6574E+03	5.9356E-01	-	6.5856E+04	3.1517E+04	-	4.7801E+02	2.1860E+02
4.6600E+01	1.6003E+03	6.6460E-02	-	5.9270E+04	6.0336E+04	-	0.0000E+00	2.0041E+03
4.6600E+01	1.5431E+03	2.6584E-01	-	5.2685E+04	6.8395E+04	-	4.7801E+03	5.9719E-02
4.6600E+01	1.4860E+03	2.1987E-01	-	4.6099E+04	1.0556E+05	-	4.3021E+03	6.5214E-01
4.6600E+01	1.4288E+03	1.4045E+01	-	3.9514E+04	1.7182E+05	-	3.8241E+03	1.3292E-01
4.6600E+01	1.3717E+03	1.7478E+01	-	3.2928E+04	4.8872E+05	-	3.3461E+03	5.9719E-02
4.6600E+01	1.3145E+03	1.5313E+01	-	2.6342E+04	1.2628E+06	-	2.8681E+03	5.9719E-02
4.6600E+01	1.2574E+03	1.5581E+01	-	1.9757E+04	3.1816E+06	-	1.4340E+03	5.0030E+00
4.6600E+01	1.2002E+03	2.8735E+01	-	1.3171E+04	5.2350E+06	-	9.5603E+02	6.3217E+00
4.6600E+01	1.1431E+03	2.7753E+01	-	6.5856E+03	7.7635E+06	-	4.7801E+02	2.0521E+01
4.6600E+01	1.0859E+03	2.3335E+01	-	0.0000E+00	1.9782E+07	-	0.0000E+00	4.8506E+02
4.6600E+01	1.0288E+03	1.2960E+01	-	2.1733E+05	1.6696E+00	-	1.0038E+04	1.3292E-01
4.6600E+01	9.7160E+02	2.6366E+01	-	1.8440E+05	6.6460E-02	-	6.2142E+03	1.3292E-01
4.6600E+01	9.1445E+02	8.5978E+01	-	1.7123E+05	2.8938E+01	-	4.7801E+03	3.4721E+00
4.6600E+01	8.5729E+02	1.0719E+02	-	1.6464E+05	3.0439E+00	-	3.8241E+03	5.1329E+00
4.6600E+01	8.0014E+02	1.0507E+02	-	1.5805E+05	3.4123E+01	-	2.8681E+03	6.5214E-01
4.6600E+01	7.4299E+02	1.6109E+04	-	1.5147E+05	3.9639E+01	-	1.9121E+03	4.2460E+00
4.6600E+01	6.8584E+02	1.4552E+03	-	1.4488E+05	2.7796E+02	-	1.4340E+03	3.8883E-01
4.6600E+01	6.2868E+02	6.3441E+04	-	1.3830E+05	8.9875E+01	-	9.5603E+02	5.9719E-02
4.6600E+01	5.7153E+02	6.1775E+04	-	1.3171E+05	4.2327E+02	-	4.7801E+02	1.0367E+01
4.6600E+01	5.1438E+02	3.2649E+04	-	1.2513E+05	3.5595E+03	-	0.0000E+00	2.9675E+01
4.6600E+01	4.5722E+02	9.8307E+04	-	1.1854E+05	1.3624E+03	-	7.1702E+03	1.3292E-01
4.6600E+01	4.0007E+02	1.4869E+05	-	1.1196E+05	1.9138E+03	-	3.8241E+03	1.2500E+00
4.6600E+01	3.4292E+02	3.7717E+05	-	1.0537E+05	3.7607E+03	-	9.5603E+02	1.2500E+00
4.6600E+01	2.8576E+02	7.8302E+05	-	9.8784E+04	1.3934E+04	-	4.7801E+02	1.2500E+00

Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
4.6600E+01	2.2861E+02	1.8882E+06	-	9.2199E+04	7.5292E+03	-	0.0000E+00	9.0021E+00
4.6600E+01	1.7146E+02	3.1138E+06	-	8.5613E+04	1.3252E+04	-	0.0000E+00	1.4240E+01
4.6600E+01	1.1431E+02	5.2267E+06	-	7.9027E+04	3.7984E+04	-	4.7801E+02	1.3292E-01
4.6600E+01	5.7153E+01	1.1697E+07	-	7.2442E+04	5.7508E+04	-	0.0000E+00	7.1186E-01
4.6600E+01	0.0000E+00	3.6040E+07	-	6.5856E+04	8.7361E+04	-	9.5603E+02	1.3292E-01
-	2.5719E+03	6.6460E-02	-	5.9270E+04	1.2219E+05	-		
-	2.2290E+03	6.6460E-02	-	5.2685E+04	1.8165E+05	-		
-	2.1147E+03	6.6460E-02	-	4.6099E+04	3.0112E+05	-		
-	1.6574E+03	6.9146E-01	-	3.9514E+04	3.4870E+05	-		
-	1.5431E+03	1.9938E-01	-	3.2928E+04	6.6578E+05	-		
-	1.4860E+03	2.5079E+00	-	2.6342E+04	1.5198E+06	-		
-	1.4288E+03	1.2500E+00	-	1.9757E+04	3.4130E+06	-		
-	1.3717E+03	9.8774E-01	-	1.3171E+04	4.9688E+06	-		
-	1.3145E+03	5.8600E+00	-	6.5856E+03	6.2079E+06	-		
-	1.2574E+03	8.9084E-01	-	0.0000E+00	1.7991E+07	-		
-	1.2002E+03	1.1561E+01	-	1.8440E+05	4.3036E+02	-		
-	1.1431E+03	1.1244E+01	-	1.7123E+05	3.0439E+00	-		
-	1.0859E+03	1.1355E+01	-	1.6464E+05	1.2183E+01	-		
-	1.0288E+03	3.2288E+01	-	1.5805E+05	1.6045E+02	-		
-	9.7160E+02	2.3693E+01	-	1.5147E+05	1.0912E+02	-		
-	9.1445E+02	5.3708E+01	-	1.4488E+05	3.2370E+02	-		
-	8.5729E+02	8.4828E+01	-	1.3830E+05	4.4520E+02	-		
-	8.0014E+02	7.4237E+03	-	1.3171E+05	3.1507E+03	-		
-	7.4299E+02	2.9635E+04	-	1.2513E+05	1.9817E+03	-		
-	6.8584E+02	3.6958E+04	-	1.1854E+05	2.9008E+03	-		
-	6.2868E+02	4.6582E+04	-	1.1196E+05	9.1842E+03	-		
-	5.7153E+02	6.6804E+04	-	1.0537E+05	9.0562E+03	-		



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
1.8972E+01	5.1438E+02	1.2761E+05	8.9046E+04	9.8784E+04	1.2636E+04			
-			-					
1.8972E+01	4.5722E+02	1.0615E+05	8.9046E+04	9.2199E+04	1.9660E+04			
-			-					
1.8972E+01	4.0007E+02	2.4872E+05	8.9046E+04	8.5613E+04	4.0131E+04			
-			-					
1.8972E+01	3.4292E+02	2.7487E+05	8.9046E+04	7.9027E+04	6.5686E+04			
-			-					
1.8972E+01	2.8576E+02	3.1800E+05	8.9046E+04	7.2442E+04	1.0181E+05			
-			-					
1.8972E+01	2.2861E+02	8.1050E+05	8.9046E+04	6.5856E+04	1.6274E+05			
-			-					
1.8972E+01	1.7146E+02	2.3023E+06	8.9046E+04	5.9270E+04	3.2065E+05			
-			-					
1.8972E+01	1.1431E+02	6.0309E+06	8.9046E+04	5.2685E+04	4.1265E+05			
-			-					
1.8972E+01	5.7153E+01	1.3418E+07	8.9046E+04	4.6099E+04	6.3136E+05			
-			-					
1.8972E+01	0.0000E+00	3.2301E+07	8.9046E+04	3.9514E+04	9.7393E+05			
-			-					
8.4544E+01	2.0004E+03	1.7500E+00	8.9046E+04	3.2928E+04	1.2939E+06			
-			-					
8.4544E+01	1.7717E+03	6.6460E-02	8.9046E+04	2.6342E+04	2.0305E+06			
-			-					
8.4544E+01	1.7146E+03	1.7500E+00	8.9046E+04	1.9757E+04	2.9213E+06			
-			-					
8.4544E+01	1.5431E+03	7.5792E-01	8.9046E+04	1.3171E+04	3.4785E+06			
-			-					
8.4544E+01	1.4860E+03	1.9938E-01	8.9046E+04	6.5856E+03	4.4011E+06			
-			-					
8.4544E+01	1.4288E+03	1.8690E+00	8.9046E+04	0.0000E+00	1.3071E+07			
-			-					
8.4544E+01	1.3717E+03	1.4351E+01	9.6633E+04	1.6464E+05	3.0439E+00			
-			-					
8.4544E+01	1.3145E+03	1.7500E+00	9.6633E+04	1.5805E+05	2.7588E+03			
-			-					
8.4544E+01	1.2574E+03	1.8401E+01	9.6633E+04	1.5147E+05	1.9897E+03			
-			-					
8.4544E+01	1.2002E+03	1.5303E+01	9.6633E+04	1.4488E+05	1.9370E+02			
-			-					
8.4544E+01	1.1431E+03	1.5488E+01	9.6633E+04	1.3830E+05	1.5805E+03			
-			-					
8.4544E+01	1.0859E+03	2.8548E+01	9.6633E+04	1.3171E+05	1.6555E+03			
-			-					
8.4544E+01	1.0288E+03	4.1868E+01	9.6633E+04	1.2513E+05	3.0903E+03			
-			-					
8.4544E+01	9.7160E+02	1.3685E+01	9.6633E+04	1.1854E+05	2.8026E+03			
-			-					
8.4544E+01	9.1445E+02	3.3948E+01	9.6633E+04	1.1196E+05	7.4537E+03			
-			-					
8.4544E+01	8.5729E+02	7.7337E+01	9.6633E+04	1.0537E+05	1.0511E+04			
-			-					
8.4544E+01	8.0014E+02	1.0159E+02	9.6633E+04	9.8784E+04	3.9198E+04			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
8.4544E+01	7.4299E+02	1.1983E+02	9.6633E+04	9.2199E+04	3.3541E+04			
-			-					
8.4544E+01	6.8584E+02	1.2479E+02	9.6633E+04	8.5613E+04	5.5174E+04			
-			-					
8.4544E+01	6.2868E+02	7.5857E+03	9.6633E+04	7.9027E+04	1.1465E+05			
-			-					
8.4544E+01	5.7153E+02	2.7456E+02	9.6633E+04	7.2442E+04	2.2143E+05			
-			-					
8.4544E+01	5.1438E+02	3.2517E+02	9.6633E+04	6.5856E+04	2.5812E+05			
-			-					
8.4544E+01	4.5722E+02	2.6123E+03	9.6633E+04	5.9270E+04	5.5683E+05			
-			-					
8.4544E+01	4.0007E+02	2.7369E+03	9.6633E+04	5.2685E+04	8.2157E+05			
-			-					
8.4544E+01	3.4292E+02	2.2764E+04	9.6633E+04	4.6099E+04	1.1704E+06			
-			-					
8.4544E+01	2.8576E+02	5.5731E+03	9.6633E+04	3.9514E+04	1.7918E+06			
-			-					
8.4544E+01	2.2861E+02	1.9608E+04	9.6633E+04	3.2928E+04	2.5267E+06			
-			-					
8.4544E+01	1.7146E+02	9.0756E+04	9.6633E+04	2.6342E+04	3.6444E+06			
-			-					
8.4544E+01	1.1431E+02	2.3442E+05	9.6633E+04	1.9757E+04	4.0364E+06			
-			-					
8.4544E+01	5.7153E+01	1.1302E+06	9.6633E+04	1.3171E+04	4.3685E+06			
-			-					
8.4544E+01	0.0000E+00	4.4207E+06	9.6633E+04	6.5856E+03	4.2734E+06			
-			-					
1.5012E+02	2.2861E+03	6.6460E-02	9.6633E+04	0.0000E+00	1.1470E+07			
-			-					
1.5012E+02	1.7146E+03	6.6460E-02	1.0422E+05	1.5147E+05	5.1113E+02			
-			-					
1.5012E+02	1.6574E+03	1.7500E+00	1.0422E+05	1.4488E+05	3.1644E+02			
-			-					
1.5012E+02	1.6003E+03	1.6696E+00	1.0422E+05	1.3830E+05	3.9385E+03			
-			-					
1.5012E+02	1.5431E+03	2.2946E+00	1.0422E+05	1.3171E+05	1.4499E+03			
-			-					
1.5012E+02	1.4860E+03	3.4057E+00	1.0422E+05	1.2513E+05	1.0651E+04			
-			-					
1.5012E+02	1.4288E+03	1.6041E+01	1.0422E+05	1.1854E+05	1.4046E+04			
-			-					
1.5012E+02	1.3717E+03	1.8829E+00	1.0422E+05	1.1196E+05	1.7454E+04			
-			-					
1.5012E+02	1.3145E+03	2.4398E+01	1.0422E+05	1.0537E+05	2.6288E+04			
-			-					
1.5012E+02	1.2574E+03	9.1338E+00	1.0422E+05	9.8784E+04	2.7589E+04			
-			-					
1.5012E+02	1.2002E+03	5.8750E+00	1.0422E+05	9.2199E+04	9.3424E+04			
-			-					
1.5012E+02	1.1431E+03	7.7500E+00	1.0422E+05	8.5613E+04	1.0289E+05			
-			-					
1.5012E+02	1.0859E+03	8.7500E+00	1.0422E+05	7.9027E+04	1.9173E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
1.5012E+02	1.0288E+03	4.7426E+01	1.0422E+05	7.2442E+04	2.6884E+05			
-			-					
1.5012E+02	9.7160E+02	4.1757E+01	1.0422E+05	6.5856E+04	3.8798E+05			
-			-					
1.5012E+02	9.1445E+02	2.4605E+01	1.0422E+05	5.9270E+04	8.1213E+05			
-			-					
1.5012E+02	8.5729E+02	4.8311E+01	1.0422E+05	5.2685E+04	1.2006E+06			
-			-					
1.5012E+02	8.0014E+02	2.8920E+01	1.0422E+05	4.6099E+04	1.8728E+06			
-			-					
1.5012E+02	7.4299E+02	5.7082E+01	1.0422E+05	3.9514E+04	2.6482E+06			
-			-					
1.5012E+02	6.8584E+02	6.2329E+01	1.0422E+05	3.2928E+04	3.9347E+06			
-			-					
1.5012E+02	6.2868E+02	9.7707E+01	1.0422E+05	2.6342E+04	4.7982E+06			
-			-					
1.5012E+02	5.7153E+02	1.1567E+02	1.0422E+05	1.9757E+04	5.1443E+06			
-			-					
1.5012E+02	5.1438E+02	1.2129E+02	1.0422E+05	1.3171E+04	4.7608E+06			
-			-					
1.5012E+02	4.5722E+02	1.3759E+02	1.0422E+05	6.5856E+03	4.7601E+06			
-			-					
1.5012E+02	4.0007E+02	2.3088E+02	1.0422E+05	0.0000E+00	1.2295E+07			
-			-					
1.5012E+02	3.4292E+02	2.3763E+03	1.1181E+05	1.7781E+05	1.7691E+02			
-			-					
1.5012E+02	2.8576E+02	4.8592E+02	1.1181E+05	1.7123E+05	2.3875E+01			
-			-					
1.5012E+02	2.2861E+02	1.9291E+04	1.1181E+05	1.6464E+05	2.8459E+02			
-			-					
1.5012E+02	1.7146E+02	4.3125E+04	1.1181E+05	1.5805E+05	2.3875E+01			
-			-					
1.5012E+02	1.1431E+02	9.1427E+04	1.1181E+05	1.5147E+05	6.8804E+02			
-			-					
1.5012E+02	5.7153E+01	2.0216E+05	1.1181E+05	1.4488E+05	6.6703E+02			
-			-					
1.5012E+02	0.0000E+00	4.7522E+05	1.1181E+05	1.3830E+05	2.7930E+03			
-			-					
2.1569E+02	1.7717E+03	1.6696E+00	1.1181E+05	1.3171E+05	1.4860E+04			
-			-					
2.1569E+02	1.6574E+03	1.7500E+00	1.1181E+05	1.2513E+05	1.4922E+04			
-			-					
2.1569E+02	1.6003E+03	1.6696E+00	1.1181E+05	1.1854E+05	2.1679E+04			
-			-					
2.1569E+02	1.5431E+03	1.7500E+00	1.1181E+05	1.1196E+05	1.7389E+04			
-			-					
2.1569E+02	1.4860E+03	1.6696E+00	1.1181E+05	1.0537E+05	4.5423E+04			
-			-					
2.1569E+02	1.4288E+03	3.4196E+00	1.1181E+05	9.8784E+04	6.2301E+04			
-			-					
2.1569E+02	1.3717E+03	9.4136E+00	1.1181E+05	9.2199E+04	6.6013E+04			
-			-					
2.1569E+02	1.3145E+03	1.0231E+01	1.1181E+05	8.5613E+04	1.3824E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.1569E+02	1.2574E+03	5.0892E+00	1.1181E+05	7.9027E+04	2.1812E+05			
-			-					
2.1569E+02	1.2002E+03	1.7425E+01	1.1181E+05	7.2442E+04	2.5571E+05			
-			-					
2.1569E+02	1.1431E+03	1.9336E+01	1.1181E+05	6.5856E+04	5.9275E+05			
-			-					
2.1569E+02	1.0859E+03	2.0759E+01	1.1181E+05	5.9270E+04	8.9331E+05			
-			-					
2.1569E+02	1.0288E+03	1.7151E+01	1.1181E+05	5.2685E+04	1.4729E+06			
-			-					
2.1569E+02	9.7160E+02	9.0000E+00	1.1181E+05	4.6099E+04	2.2360E+06			
-			-					
2.1569E+02	9.1445E+02	2.4344E+01	1.1181E+05	3.9514E+04	3.5527E+06			
-			-					
2.1569E+02	8.5729E+02	3.6329E+00	1.1181E+05	3.2928E+04	4.8129E+06			
-			-					
2.1569E+02	8.0014E+02	1.5670E+01	1.1181E+05	2.6342E+04	5.7959E+06			
-			-					
2.1569E+02	7.4299E+02	1.5589E+01	1.1181E+05	1.9757E+04	5.7385E+06			
-			-					
2.1569E+02	6.8584E+02	2.4582E+01	1.1181E+05	1.3171E+04	5.9987E+06			
-			-					
2.1569E+02	6.2868E+02	2.0678E+01	1.1181E+05	6.5856E+03	4.8202E+06			
-			-					
2.1569E+02	5.7153E+02	4.7301E+01	1.1181E+05	0.0000E+00	1.3422E+07			
-			-					
2.1569E+02	5.1438E+02	6.2776E+01	1.1939E+05	1.7123E+05	2.3875E+01			
-			-					
2.1569E+02	4.5722E+02	4.1728E+01	1.1939E+05	1.5805E+05	3.7770E+02			
-			-					
2.1569E+02	4.0007E+02	7.1437E+01	1.1939E+05	1.5147E+05	5.1558E+02			
-			-					
2.1569E+02	3.4292E+02	1.4695E+02	1.1939E+05	1.4488E+05	3.6454E+02			
-			-					
2.1569E+02	2.8576E+02	3.1577E+01	1.1939E+05	1.3830E+05	3.1479E+03			
-			-					
2.1569E+02	2.2861E+02	1.9535E+02	1.1939E+05	1.3171E+05	3.5381E+03			
-			-					
2.1569E+02	1.7146E+02	1.0284E+02	1.1939E+05	1.2513E+05	1.4252E+04			
-			-					
2.1569E+02	1.1431E+02	3.1358E+02	1.1939E+05	1.1854E+05	1.5716E+04			
-			-					
2.1569E+02	5.7153E+01	3.0097E+04	1.1939E+05	1.1196E+05	4.7104E+04			
-			-					
2.1569E+02	0.0000E+00	2.5725E+05	1.1939E+05	1.0537E+05	5.6672E+04			
-			-					
2.8126E+02	2.1718E+03	6.2500E-01	1.1939E+05	9.8784E+04	7.6861E+04			
-			-					
2.8126E+02	1.6574E+03	1.7500E+00	1.1939E+05	9.2199E+04	8.4890E+04			
-			-					
2.8126E+02	1.3717E+03	3.4196E+00	1.1939E+05	8.5613E+04	1.9285E+05			
-			-					
2.8126E+02	1.3145E+03	6.9196E+00	1.1939E+05	7.9027E+04	3.1795E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
2.8126E+02	1.2574E+03	5.1696E+00	1.1939E+05	7.2442E+04	3.8144E+05			
-			-					
2.8126E+02	1.2002E+03	6.6784E+00	1.1939E+05	6.5856E+04	6.3115E+05			
-			-					
2.8126E+02	1.1431E+03	1.7500E+00	1.1939E+05	5.9270E+04	1.0178E+06			
-			-					
2.8126E+02	1.0859E+03	1.1670E+01	1.1939E+05	5.2685E+04	1.5593E+06			
-			-					
2.8126E+02	1.0288E+03	3.5000E+00	1.1939E+05	4.6099E+04	2.6455E+06			
-			-					
2.8126E+02	9.7160E+02	4.5892E+00	1.1939E+05	3.9514E+04	4.2486E+06			
-			-					
2.8126E+02	9.1445E+02	1.7500E+00	1.1939E+05	3.2928E+04	5.5991E+06			
-			-					
2.8126E+02	8.5729E+02	6.8392E+00	1.1939E+05	2.6342E+04	7.1638E+06			
-			-					
2.8126E+02	8.0014E+02	2.6584E-01	1.1939E+05	1.9757E+04	7.0216E+06			
-			-					
2.8126E+02	7.4299E+02	1.1428E+01	1.1939E+05	1.3171E+04	6.3821E+06			
-			-					
2.8126E+02	6.8584E+02	7.1329E+00	1.1939E+05	6.5856E+03	4.9229E+06			
-			-					
2.8126E+02	6.2868E+02	2.0972E+01	1.1939E+05	0.0000E+00	1.5983E+07			
-			-					
2.8126E+02	5.7153E+02	6.6784E+00	1.2698E+05	1.5805E+05	2.3875E+01			
-			-					
2.8126E+02	5.1438E+02	4.3830E+01	1.2698E+05	1.5147E+05	2.3875E+01			
-			-					
2.8126E+02	4.5722E+02	1.8428E+01	1.2698E+05	1.4488E+05	1.0822E+03			
-			-					
2.8126E+02	4.0007E+02	1.3972E+01	1.2698E+05	1.3830E+05	1.6837E+03			
-			-					
2.8126E+02	3.4292E+02	3.0962E+01	1.2698E+05	1.3171E+05	4.3528E+03			
-			-					
2.8126E+02	2.8576E+02	5.2401E+01	1.2698E+05	1.2513E+05	1.2237E+04			
-			-					
2.8126E+02	2.2861E+02	4.6979E+01	1.2698E+05	1.1854E+05	3.2389E+03			
-			-					
2.8126E+02	1.7146E+02	6.2705E+01	1.2698E+05	1.1196E+05	3.0664E+04			
-			-					
2.8126E+02	1.1431E+02	1.0943E+02	1.2698E+05	1.0537E+05	4.0466E+04			
-			-					
2.8126E+02	5.7153E+01	1.4934E+04	1.2698E+05	9.8784E+04	9.2417E+04			
-			-					
2.8126E+02	0.0000E+00	1.1871E+05	1.2698E+05	9.2199E+04	1.3985E+05			
-			-					
3.4683E+02	1.6574E+03	1.6696E+00	1.2698E+05	8.5613E+04	2.3928E+05			
-			-					
3.4683E+02	1.4288E+03	1.6696E+00	1.2698E+05	7.9027E+04	3.5404E+05			
-			-					
3.4683E+02	1.3717E+03	1.6696E+00	1.2698E+05	7.2442E+04	5.2439E+05			
-			-					
3.4683E+02	1.3145E+03	6.6784E+00	1.2698E+05	6.5856E+04	9.9967E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
3.4683E+02	1.2002E+03	1.6696E+00	1.2698E+05	5.9270E+04	1.4844E+06			
-			-					
3.4683E+02	1.0859E+03	3.5000E+00	1.2698E+05	5.2685E+04	2.4369E+06			
-			-					
3.4683E+02	9.7160E+02	1.2500E+00	1.2698E+05	4.6099E+04	3.5128E+06			
-			-					
3.4683E+02	9.1445E+02	6.8392E+00	1.2698E+05	3.9514E+04	5.2129E+06			
-			-					
3.4683E+02	8.0014E+02	3.3392E+00	1.2698E+05	3.2928E+04	6.9866E+06			
-			-					
3.4683E+02	7.4299E+02	1.2282E+01	1.2698E+05	2.6342E+04	8.6384E+06			
-			-					
3.4683E+02	6.8584E+02	3.3392E+00	1.2698E+05	1.9757E+04	8.3908E+06			
-			-					
3.4683E+02	6.2868E+02	2.6860E+01	1.2698E+05	1.3171E+04	7.6123E+06			
-			-					
3.4683E+02	5.1438E+02	4.5892E+00	1.2698E+05	6.5856E+03	6.1079E+06			
-			-					
3.4683E+02	4.5722E+02	1.1428E+01	1.2698E+05	0.0000E+00	1.7931E+07			
-			-					
3.4683E+02	4.0007E+02	8.0892E+00	1.3457E+05	1.4488E+05	5.4075E+01			
-			-					
3.4683E+02	3.4292E+02	7.0000E+00	1.3457E+05	1.3830E+05	7.9480E+01			
-			-					
3.4683E+02	2.8576E+02	1.8401E+01	1.3457E+05	1.3171E+05	1.5896E+02			
-			-					
3.4683E+02	2.2861E+02	3.1018E+01	1.3457E+05	1.2513E+05	2.7401E+03			
-			-					
3.4683E+02	1.7146E+02	3.7745E+01	1.3457E+05	1.1854E+05	6.9011E+03			
-			-					
3.4683E+02	1.1431E+02	9.4070E+01	1.3457E+05	1.1196E+05	9.8189E+03			
-			-					
3.4683E+02	5.7153E+01	1.5548E+02	1.3457E+05	1.0537E+05	1.7289E+04			
-			-					
3.4683E+02	0.0000E+00	2.9784E+04	1.3457E+05	9.8784E+04	4.0200E+04			
-			-					
4.1240E+02	1.4288E+03	1.6696E+00	1.3457E+05	9.2199E+04	5.4921E+04			
-			-					
4.1240E+02	1.3717E+03	3.4196E+00	1.3457E+05	8.5613E+04	1.0111E+05			
-			-					
4.1240E+02	1.3145E+03	1.6696E+00	1.3457E+05	7.9027E+04	2.7676E+05			
-			-					
4.1240E+02	1.1431E+03	3.5000E+00	1.3457E+05	7.2442E+04	4.9380E+05			
-			-					
4.1240E+02	1.0288E+03	3.5000E+00	1.3457E+05	6.5856E+04	1.0764E+06			
-			-					
4.1240E+02	9.7160E+02	3.5000E+00	1.3457E+05	5.9270E+04	1.5945E+06			
-			-					
4.1240E+02	7.4299E+02	7.1329E+00	1.3457E+05	5.2685E+04	2.5009E+06			
-			-					
4.1240E+02	6.2868E+02	3.3392E+00	1.3457E+05	4.6099E+04	3.7866E+06			
-			-					
4.1240E+02	5.7153E+02	2.2521E+01	1.3457E+05	3.9514E+04	5.6785E+06			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
4.1240E+02	5.1438E+02	1.3839E+01	1.3457E+05	3.2928E+04	7.2187E+06			
-			-					
4.1240E+02	4.5722E+02	1.7018E+01	1.3457E+05	2.6342E+04	8.6076E+06			
-			-					
4.1240E+02	4.0007E+02	1.7339E+01	1.3457E+05	1.9757E+04	8.8525E+06			
-			-					
4.1240E+02	3.4292E+02	1.7018E+01	1.3457E+05	1.3171E+04	8.2287E+06			
-			-					
4.1240E+02	2.8576E+02	1.3518E+01	1.3457E+05	6.5856E+03	6.6601E+06			
-			-					
4.1240E+02	2.2861E+02	3.7039E+01	1.3457E+05	0.0000E+00	1.9040E+07			
-			-					
4.1240E+02	1.7146E+02	3.3378E+01	1.4215E+05	1.3830E+05	7.9480E+01			
-			-					
4.1240E+02	1.1431E+02	6.0294E+01	1.4215E+05	1.2513E+05	9.4738E+02			
-			-					
4.1240E+02	5.7153E+01	7.5112E+01	1.4215E+05	1.1854E+05	1.6490E+03			
-			-					
4.1240E+02	0.0000E+00	6.8519E+02	1.4215E+05	1.1196E+05	1.0285E+03			
-			-					
4.7798E+02	1.4860E+03	1.2500E+00	1.4215E+05	1.0537E+05	4.0114E+03			
-			-					
4.7798E+02	1.2574E+03	3.3392E+00	1.4215E+05	9.8784E+04	1.8343E+04			
-			-					
4.7798E+02	7.4299E+02	1.6521E+01	1.4215E+05	9.2199E+04	3.1974E+04			
-			-					
4.7798E+02	6.8584E+02	6.8392E+00	1.4215E+05	8.5613E+04	4.0108E+04			
-			-					
4.7798E+02	6.2868E+02	1.7178E+01	1.4215E+05	7.9027E+04	1.0047E+05			
-			-					
4.7798E+02	5.7153E+02	1.0339E+01	1.4215E+05	7.2442E+04	9.8908E+04			
-			-					
4.7798E+02	4.5722E+02	6.8392E+00	1.4215E+05	6.5856E+04	2.9187E+05			
-			-					
4.7798E+02	4.0007E+02	2.0021E+01	1.4215E+05	5.9270E+04	5.5560E+05			
-			-					
4.7798E+02	3.4292E+02	2.4018E+01	1.4215E+05	5.2685E+04	1.0563E+06			
-			-					
4.7798E+02	2.8576E+02	7.0000E+00	1.4215E+05	4.6099E+04	1.9039E+06			
-			-					
4.7798E+02	2.2861E+02	2.6699E+01	1.4215E+05	3.9514E+04	2.9103E+06			
-			-					
4.7798E+02	1.7146E+02	4.0217E+01	1.4215E+05	3.2928E+04	4.4930E+06			
-			-					
4.7798E+02	1.1431E+02	6.0210E+01	1.4215E+05	2.6342E+04	5.8308E+06			
-			-					
4.7798E+02	5.7153E+01	7.0835E+01	1.4215E+05	1.9757E+04	6.4571E+06			
-			-					
4.7798E+02	0.0000E+00	1.4557E+02	1.4215E+05	1.3171E+04	5.2324E+06			
-			-					
5.4355E+02	8.5729E+02	3.5000E+00	1.4215E+05	6.5856E+03	5.0997E+06			
-			-					
5.4355E+02	8.0014E+02	3.5000E+00	1.4215E+05	0.0000E+00	1.4291E+07			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
5.4355E+02	6.8584E+02	3.5000E+00	1.4974E+05	1.3171E+05	7.9480E+01			
-			-					
5.4355E+02	6.2868E+02	3.3392E+00	1.4974E+05	1.1854E+05	1.6696E+00			
-			-					
5.4355E+02	2.8576E+02	1.3518E+01	1.4974E+05	1.1196E+05	1.0269E+03			
-			-					
5.4355E+02	2.2861E+02	3.4721E+00	1.4974E+05	9.8784E+04	1.7179E+03			
-			-					
5.4355E+02	1.7146E+02	2.7035E+01	1.4974E+05	9.2199E+04	4.6603E+03			
-			-					
5.4355E+02	1.1431E+02	4.0553E+01	1.4974E+05	8.5613E+04	1.1512E+04			
-			-					
5.4355E+02	5.7153E+01	1.2212E+02	1.4974E+05	7.9027E+04	3.1767E+03			
-			-					
5.4355E+02	0.0000E+00	7.8079E+01	1.4974E+05	7.2442E+04	3.4393E+04			
-			-					
6.0912E+02	8.5729E+02	3.5000E+00	1.4974E+05	6.5856E+04	4.2235E+04			
-			-					
6.0912E+02	5.1438E+02	6.6784E+00	1.4974E+05	5.9270E+04	1.8228E+05			
-			-					
6.0912E+02	4.0007E+02	3.3392E+00	1.4974E+05	5.2685E+04	2.7117E+05			
-			-					
6.0912E+02	3.4292E+02	1.3357E+01	1.4974E+05	4.6099E+04	6.4882E+05			
-			-					
6.0912E+02	2.8576E+02	6.9721E+00	1.4974E+05	3.9514E+04	1.0881E+06			
-			-					
6.0912E+02	2.2861E+02	3.3392E+00	1.4974E+05	3.2928E+04	1.6187E+06			
-			-					
6.0912E+02	1.7146E+02	1.7018E+01	1.4974E+05	2.6342E+04	2.2494E+06			
-			-					
6.0912E+02	1.1431E+02	3.4140E+01	1.4974E+05	1.9757E+04	2.6405E+06			
-			-					
6.0912E+02	5.7153E+01	4.8411E+01	1.4974E+05	1.3171E+04	2.4523E+06			
-			-					
6.0912E+02	0.0000E+00	6.9202E+01	1.4974E+05	6.5856E+03	2.4637E+06			
-			-					
6.7469E+02	2.8576E+02	6.6784E+00	1.4974E+05	0.0000E+00	7.0534E+06			
-			-					
6.7469E+02	2.2861E+02	6.6784E+00	1.5733E+05	7.2442E+04	2.4989E+03			
-			-					
6.7469E+02	1.7146E+02	6.6784E+00	1.5733E+05	6.5856E+04	1.2288E+03			
-			-					
6.7469E+02	1.1431E+02	2.0329E+01	1.5733E+05	5.9270E+04	9.9016E+03			
-			-					
6.7469E+02	5.7153E+01	4.8964E+01	1.5733E+05	5.2685E+04	1.6869E+04			
-			-					
6.7469E+02	0.0000E+00	4.6525E+01	1.5733E+05	4.6099E+04	5.8498E+04			
-			-					
7.4027E+02	4.5722E+02	6.6784E+00	1.5733E+05	3.9514E+04	1.7985E+05			
-			-					
7.4027E+02	2.2861E+02	3.3392E+00	1.5733E+05	3.2928E+04	2.5443E+05			
-			-					
7.4027E+02	1.7146E+02	3.3392E+00	1.5733E+05	2.6342E+04	4.5223E+05			



Markov Matrices

Tower shear, bottom F_y [kN]			Tower bending, bottom M_x [kNm]			Tower torsion, bottom M_z [kNm]		
Level	Range	Cycles	Level	Range	Cycles	Level	Range	Cycles
-			-					
7.4027E+02	1.1431E+02	6.6784E+00	1.5733E+05	1.9757E+04	5.1828E+05			
-			-					
7.4027E+02	5.7153E+01	6.6784E+00	1.5733E+05	1.3171E+04	5.1386E+05			
-			-					
7.4027E+02	0.0000E+00	2.4151E+01	1.5733E+05	6.5856E+03	5.7080E+05			
-			-					
8.0584E+02	4.0007E+02	3.3392E+00	1.5733E+05	0.0000E+00	2.4753E+06			
-			-					
8.0584E+02	2.2861E+02	3.3392E+00	1.6491E+05	7.9027E+04	4.7750E+01			
-			-					
8.0584E+02	1.7146E+02	6.6784E+00	1.6491E+05	5.2685E+04	1.5590E+02			
-			-					
8.0584E+02	1.1431E+02	3.5000E+00	1.6491E+05	4.6099E+04	6.2061E+03			
-			-					
8.0584E+02	5.7153E+01	1.0178E+01	1.6491E+05	3.9514E+04	1.3502E+04			
-			-					
8.0584E+02	0.0000E+00	1.3811E+01	1.6491E+05	3.2928E+04	9.3562E+03			
-			-					
8.7141E+02	5.7153E+01	1.0018E+01	1.6491E+05	2.6342E+04	2.9456E+04			
-			-					
9.3698E+02	5.7153E+01	6.6784E+00	1.6491E+05	1.9757E+04	3.5605E+04			
-			-					
9.3698E+02	0.0000E+00	6.8392E+00	1.6491E+05	1.3171E+04	3.4467E+04			
-			-					
1.0026E+03	5.7153E+01	3.3392E+00	1.6491E+05	6.5856E+03	4.1551E+04			
-			-					
1.0026E+03	0.0000E+00	3.3392E+00	1.6491E+05	0.0000E+00	4.4768E+05			
			-					
			1.7250E+05	5.2685E+04	3.3392E+00			
			-					
			1.7250E+05	3.2928E+04	6.6784E+00			
			-					
			1.7250E+05	2.6342E+04	1.3357E+01			
			-					
			1.7250E+05	1.9757E+04	5.7768E+01			
			-					
			1.7250E+05	1.3171E+04	1.0018E+01			
			-					
			1.7250E+05	6.5856E+03	2.2552E+03			
			-					
			1.7250E+05	0.0000E+00	3.6677E+04			
			-					
			1.8009E+05	1.9757E+04	3.3392E+00			
			-					
			1.8009E+05	0.0000E+00	2.3754E+03			

Table 5-18 [8] Markov Matrix