

DEVELOPMENT OF STRUCTURE
MATERIALS AND CROSS-SECTIONS

Design Code

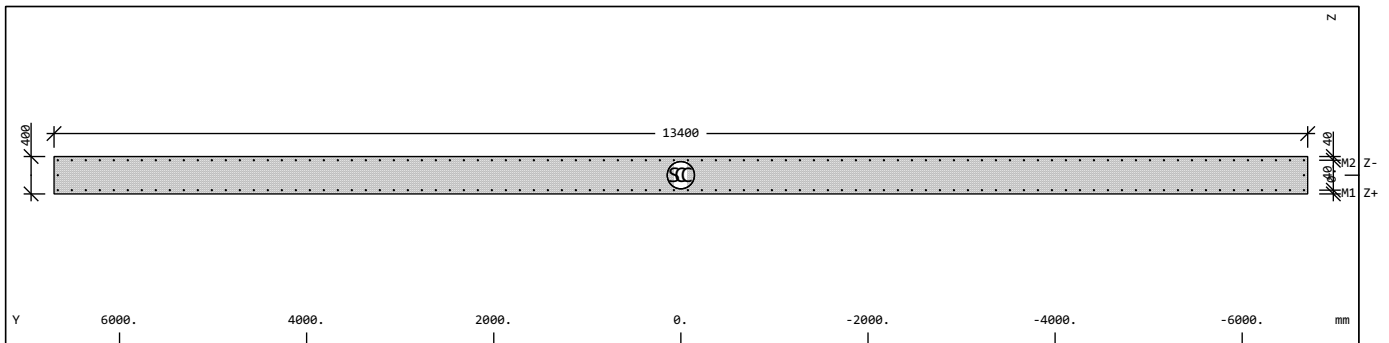
EuroNorm Bridges: NS EN 1992-2:2005 (NA:2010) Design of concrete structures (Norge) V 2025
Konstruksjon: D (Jernbanebruer)

Snow load zone : 1

Materials

Mat	Classification
1	C 55/67 (EN 1992)
2	B 500 B (EN 1992)
3	=Macalloy 520

Cross section No. 1 - B/H = 13400 / 400 mm



Cross section No. 1 - B/H = 13400 / 400 mm

Static properties of cross section

SNo	Mat	A[m ²]	Ay[m ²]	Iy[m ⁴]	yc[mm]	ysc[mm]	E[N/mm ²]	g[kg/m]	I-1[m ⁴]
	MRF	It[m ⁴]	Az[m ²]	Iz[m ⁴]	zc[mm]	zsc[mm]	G[N/mm ²]		I-2[m ⁴]
			Ayz[m ²]	Iyz[m ⁴]					α[°]
1	1	5.3600E+00	4.467E+00	7.147E-02	0.0	0.0	38214	13400.0	8.020E+01
	2 ¹	2.805E-01	4.467E+00	8.020E+01	0.0	0.0	15923	(CENTR)	7.146E-02

= B/H = 13400 / 400 mm

= (D-As 40 / 40 mm)

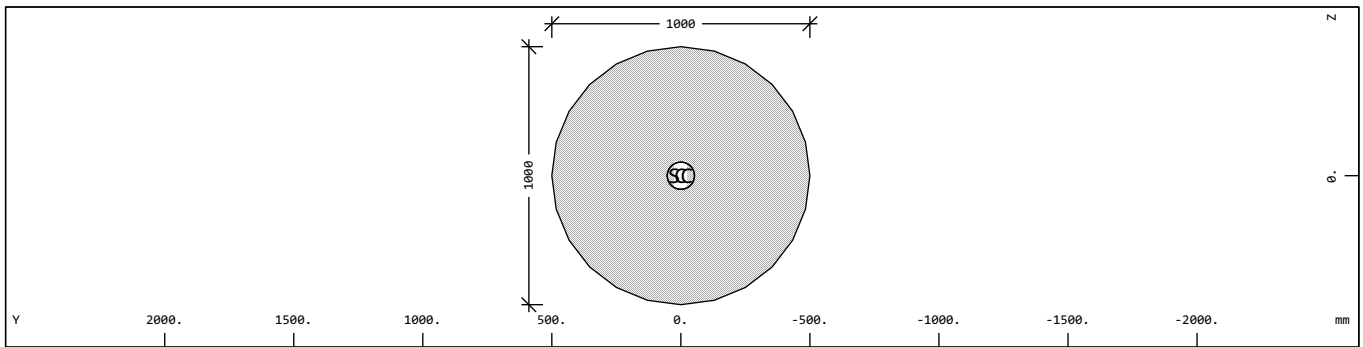
¹ Reinforcements are not considered in the sectional values

SNo	section number	yc[mm],zc[mm]	ordinate of elastic centroid
Mat	material number	ysc[mm],zsc[mm]	ordinate of shear centre
A[m ²]	sectional area	E[N/mm ²]	Young's modulus
Ay[m ²],Az[m ²],Ayz[m ²]	transverse shear deformation area	g[kg/m]	mass per length
Iy[m ⁴],Iz[m ⁴],Iyz[m ⁴]	bending moment of inertia		
I-1[m ⁴],I-2[m ⁴],α[°]	principal moments of inertia and angle of the principal axes		
MRF	reinforcement material number		
It[m ⁴]	torsional moment of inertia		
G[N/mm ²]	Shear modulus		

Reinforcement global values

Layer	Mref	Mat	As	As-min	As-max	D	yr	zr	L-tors	N-p	My-p	Mz-p
			[cm ²]	[cm ²]	[cm ²]	[mm]	[mm]	[mm]	[mm]	[kN]	[kNm]	[kNm]
M1	Z+	1	2	71.10	0.00		10	0.0	160.0	13320.0		
M2	Z-	1	2	71.10	0.00		10	0.0	-160.0	13320.0		
M3	Y+-	1	2	1.58	0.00	1.58	10	0.0	0.0	640.0		
Layer	layer of reinforcement		D	bar diameter								
Mref	embedding reference material		yr,zr	ordinate of elastic centroid								
Mat	material number		L-tors	torsional effective length								
As	reinforcement area		N-p	prestress normal force								
As-min	minimum reinforcement area		My-p,Mz-p	prestress bending moment								
As-max	maximum reinforcement area											

Cross section No. 2 - D 1000 mm

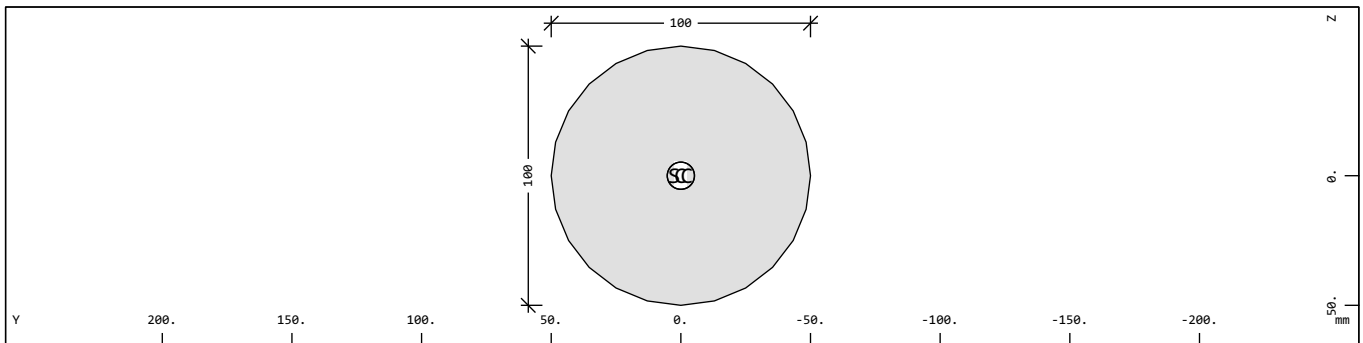
DEVELOPMENT OF STRUCTURE
MATERIALS AND CROSS-SECTIONS

Cross section No. 2 - D 1000 mm

Static properties of cross section

SNo	Mat	A[m ²]	Ay[m ²]	Iy[m ⁴]	yc[mm]	ysc[mm]	E[N/mm ²]	g[kg/m]	I-1[m ⁴]
	MRf	It[m ⁴]	Az[m ²]	Iz[m ⁴]	zc[mm]	zsc[mm]	G[N/mm ²]		I-2[m ⁴]
			Ayz[m ²]	Iyz[m ⁴]					α[°]
2	2	7.8540E-01	7.069E-01	4.909E-02	0.0	0.0	200000	6165.4	
		9.817E-02	7.069E-01	4.909E-02	0.0	0.0	76923	(COMPR)	
= D 1000 mm									
SNo	section number			yc[mm],zc[mm]		ordinate of elastic centroid			
Mat	material number			ysc[mm],zsc[mm]		ordinate of shear centre			
A[m ²]	sectional area			E[N/mm ²]		Young's modulus			
Ay[m ²],Az[m ²],Ayz[m ²]	transverse shear deformation area			g[kg/m]		mass per length			
Iy[m ⁴],Iz[m ⁴],Iyz[m ⁴]	bending moment of inertia								
I-1[m ⁴],I-2[m ⁴],α[°]	principal moments of inertia and angle of the principal axes								
MRf	reinforcement material number								
It[m ⁴]	torsional moment of inertia								
G[N/mm ²]	Shear modulus								

Cross section No. 3 - D 100 mm

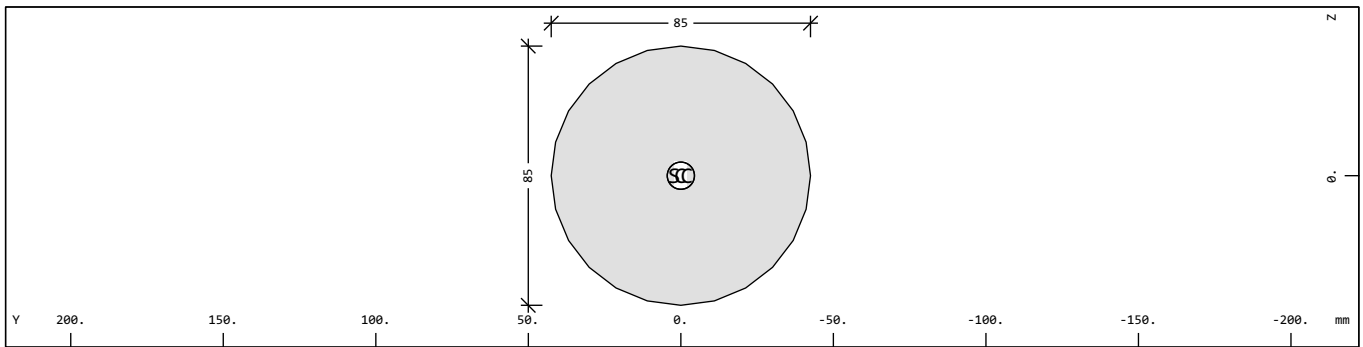


Cross section No. 3 - D 100 mm

Static properties of cross section

SNo	Mat	A[m ²]	Ay[m ²]	Iy[m ⁴]	yc[mm]	ysc[mm]	E[N/mm ²]	g[kg/m]	I-1[m ⁴]
	MRf	It[m ⁴]	Az[m ²]	Iz[m ⁴]	zc[mm]	zsc[mm]	G[N/mm ²]		I-2[m ⁴]
			Ayz[m ²]	Iyz[m ⁴]					α[°]
3	3	7.8540E-03	7.069E-03	4.909E-06	0.0	0.0	210000	61.7	
		9.817E-06	7.069E-03	4.909E-06	0.0	0.0	81000	(COMPR)	
= D 100 mm									
SNo	section number			yc[mm],zc[mm]		ordinate of elastic centroid			
Mat	material number			ysc[mm],zsc[mm]		ordinate of shear centre			
A[m ²]	sectional area			E[N/mm ²]		Young's modulus			
Ay[m ²],Az[m ²],Ayz[m ²]	transverse shear deformation area			g[kg/m]		mass per length			
Iy[m ⁴],Iz[m ⁴],Iyz[m ⁴]	bending moment of inertia								
I-1[m ⁴],I-2[m ⁴],α[°]	principal moments of inertia and angle of the principal axes								
MRf	reinforcement material number								
It[m ⁴]	torsional moment of inertia								
G[N/mm ²]	Shear modulus								

Cross section No. 4 - D 85 mm

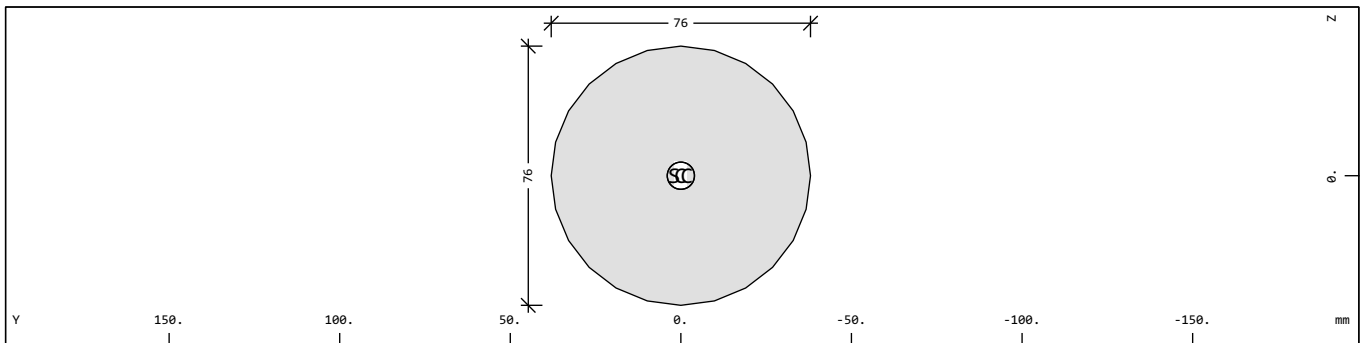
DEVELOPMENT OF STRUCTURE
MATERIALS AND CROSS-SECTIONS

Cross section No. 4 - D 85 mm

Static properties of cross section

SNo	Mat	A[m ²]	Ay[m ²]	Iy[m ⁴]	yc[mm]	ysc[mm]	E[N/mm ²]	g[kg/m]	I-1[m ⁴]
	MRf	It[m ⁴]	Az[m ²]	Iz[m ⁴]	zc[mm]	zsc[mm]	G[N/mm ²]		I-2[m ⁴]
			Ayz[m ²]	Iyz[m ⁴]					α[°]
4	3	5.6745E-03	5.107E-03	2.562E-06	0.0	0.0	210000	44.5	
		5.125E-06	5.107E-03	2.562E-06	0.0	0.0	81000	(COMPR)	
= D 85 mm									
SNo	section number			yc[mm],zc[mm]		ordinate of elastic centroid			
Mat	material number			ysc[mm],zsc[mm]		ordinate of shear centre			
A[m ²]	sectional area			E[N/mm ²]		Young's modulus			
Ay[m ²],Az[m ²],Ayz[m ²]	transverse shear deformation area			g[kg/m]		mass per length			
Iy[m ⁴],Iz[m ⁴],Iyz[m ⁴]	bending moment of inertia								
I-1[m ⁴],I-2[m ⁴],α[°]	principal moments of inertia and angle of the principal axes								
MRf	reinforcement material number								
It[m ⁴]	torsional moment of inertia								
G[N/mm ²]	Shear modulus								

Cross section No. 5 - D 76 mm



Cross section No. 5 - D 76 mm

Static properties of cross section

SNo	Mat	A[m ²]	Ay[m ²]	Iy[m ⁴]	yc[mm]	ysc[mm]	E[N/mm ²]	g[kg/m]	I-1[m ⁴]
	MRf	It[m ⁴]	Az[m ²]	Iz[m ⁴]	zc[mm]	zsc[mm]	G[N/mm ²]		I-2[m ⁴]
			Ayz[m ²]	Iyz[m ⁴]					α[°]
5	3	4.5365E-03	4.083E-03	1.638E-06	0.0	0.0	210000	35.6	
		3.275E-06	4.083E-03	1.638E-06	0.0	0.0	81000	(COMPR)	
= D 76 mm									
SNo	section number			yc[mm],zc[mm]		ordinate of elastic centroid			
Mat	material number			ysc[mm],zsc[mm]		ordinate of shear centre			
A[m ²]	sectional area			E[N/mm ²]		Young's modulus			
Ay[m ²],Az[m ²],Ayz[m ²]	transverse shear deformation area			g[kg/m]		mass per length			
Iy[m ⁴],Iz[m ⁴],Iyz[m ⁴]	bending moment of inertia								
I-1[m ⁴],I-2[m ⁴],α[°]	principal moments of inertia and angle of the principal axes								
MRf	reinforcement material number								
It[m ⁴]	torsional moment of inertia								
G[N/mm ²]	Shear modulus								

DEVELOPMENT OF STRUCTURE

Groups

Grp	Number	Type	min-no	max-no	Designation
1	149	BEAM	10001	10149	
102	62	BEAM	1020001	1020062	
201	1	TRUS	2010001	2010001	
202	1	TRUS	2020001	2020001	
203	1	TRUS	2030001	2030001	
204	1	TRUS	2040001	2040001	
205	1	TRUS	2050001	2050001	
206	1	TRUS	2060001	2060001	
207	1	TRUS	2070001	2070001	
301	1	TRUS	3010001	3010001	
302	1	TRUS	3020001	3020001	
303	1	TRUS	3030001	3030001	
304	1	TRUS	3040001	3040001	
305	1	TRUS	3050001	3050001	
Grp primary group number Type element type					
Number number of elements within group min-no,max-no minimum/maximum element number					

Summary of beam elements

Groups

Grp	TotLength [m]	Max.Length [m]	TotVolume [m³]	TotMass [t]	Surface [m²]	Designation
1	73.256	0.507	392.652	981.630	2021.866	
102	30.880	0.498	24.253	190.387	97.012	
Sum	104.136		416.905	1172.017	2118.878	
Grp primary group number TotVolume Total volume						
TotLength Total length TotMass Total mass						
Max.Length Maximum length in an element Surface Total surface						

Summary of truss elements

Groups

Grp	TotLength [m]	Max.Length [m]	TotVolume [m³]	TotMass [t]	Surface [m²]	Designation
201	51.360	51.360	0.403	3.167	16.135	
202	45.253	45.253	0.355	2.790	14.217	
203	39.560	39.560	0.224	1.762	10.564	
204	34.490	34.490	0.196	1.536	9.210	
205	30.354	30.354	0.172	1.352	8.105	
206	27.576	27.576	0.125	0.982	6.584	
207	27.576	27.576	0.125	0.982	6.584	
301	32.673	32.673	0.148	1.164	7.801	
302	33.647	33.647	0.153	1.198	8.034	
303	34.670	34.670	0.197	1.544	9.258	
304	35.739	35.739	0.281	2.203	11.228	
305	36.848	36.848	0.289	2.272	11.576	
Sum	429.744		2.669	20.953	119.296	
Grp primary group number TotVolume Total volume						
TotLength Total length TotMass Total mass						
Max.Length Maximum length in an element Surface Total surface						

Summary of all elements

Groups

Grp	TotLength [m]	TotArea [m²]	TotVolume [m³]	TotMass [t]	Designation
1	73.256	0.000	392.652	981.630	
102	30.880	0.000	24.253	190.387	
201	51.360	0.000	0.403	3.167	
202	45.253	0.000	0.355	2.790	
203	39.560	0.000	0.224	1.762	
204	34.490	0.000	0.196	1.536	
205	30.354	0.000	0.172	1.352	

DEVELOPMENT OF STRUCTURE

Groups

Grp	TotLength [m]	TotArea [m²]	TotVolume [m³]	TotMass [t]	Designation
206	27.576	0.000	0.125	0.982	
207	27.576	0.000	0.125	0.982	
301	32.673	0.000	0.148	1.164	
302	33.647	0.000	0.153	1.198	
303	34.670	0.000	0.197	1.544	
304	35.739	0.000	0.281	2.203	
305	36.848	0.000	0.289	2.272	
Sum	533.880	0.000	419.574	1192.970	
Grp	primary group number		TotVolume	Total volume	
TotLength	Total length		TotMass	Total mass	
TotArea	Total area				

DEVELOPMENT OF STRUCTURE
EIGEN VALUE OF BRIDGESystem- and Control Information
Control Information

Number of unknowns 1262
 unknowns per node 6
 Number eigenvalues 25

Groups

Grp	Option	CS	Factor	Rayleigh-A [Hz]	Rayleigh-B [msec]	ξ [%]	Wind
1	FULL		1.000	0.000	0.000	0.00	
102	FULL		1.000	0.000	0.000	0.00	
201	FULL		1.000	0.000	0.000	0.00	0 0.000
202	FULL		1.000	0.000	0.000	0.00	0 0.000
203	FULL		1.000	0.000	0.000	0.00	0 0.000
204	FULL		1.000	0.000	0.000	0.00	0 0.000
205	FULL		1.000	0.000	0.000	0.00	0 0.000
206	FULL		1.000	0.000	0.000	0.00	0 0.000
207	FULL		1.000	0.000	0.000	0.00	0 0.000
301	FULL		1.000	0.000	0.000	0.00	0 0.000
302	FULL		1.000	0.000	0.000	0.00	0 0.000
303	FULL		1.000	0.000	0.000	0.00	0 0.000
304	FULL		1.000	0.000	0.000	0.00	0 0.000
305	FULL		1.000	0.000	0.000	0.00	0 0.000
CS		construction stage		Rayleigh-B		stiffness proportional damping ratio	
Factor		Factor on stiffness		ξ		modal damping ratio	
Rayleigh-A		mass proportional damping ratio		Wind		options for dynamic wind loading	

Beam Elements

Finite beam elements without intermediate sections
 Shear deformations accounted for with nonconforming SOFiSTiK-Timoshenko beam

Sum of masses and mass moments of inertia

Node	TM			RM			RMB [tm ²]
	X[t]	Y[t]	Z[t]	X[tm ²]	Y[tm ²]	Z[tm ²]	
total ¹	1192.970	1192.970	1192.970	1.471E+04	2.499E+01	1.471E+04	-
	S[m] ²			RM(S) ³			
	39.687	0.017	2.012	4.136E+04	2.928E+02	3.499E+04	
				2.928E+02	5.407E+05	1.996E+02	
				3.499E+04	1.996E+02	4.993E+05	
active ¹	1183.844	1168.541	1180.552	1.461E+04	2.485E+01	1.466E+04	-
	S[m] ²			RM(S) ³			
	39.439	0.016	2.039	3.282E+04	3.353E+02	1.932E+04	
				3.353E+02	5.356E+05	2.020E+02	
				1.932E+04	2.020E+02	4.776E+05	
¹ sum of the total and the active nodal masses							
² coordinates of the center of gravity							
³ 3x3 rotational mass matrix at the center of gravity							
TM translational masses in X-, Y- and Z-direction							
RM rotational masses about X-, Y- and Z-axis							
RMB warping mass							

Processing

Parameter of System of Equations

Number of unknowns 1262 (Direct sparse Gauss-Solver)
 Total entries 3828
 Total entries after fill in 5964
 Mass matrix 2526 (consistent), incl. rotational masses

Control Information

Using Lanczos Method	
Iteration vectors	50

DEVELOPMENT OF STRUCTURE
EIGEN VALUE OF BRIDGE

Eigenvalues

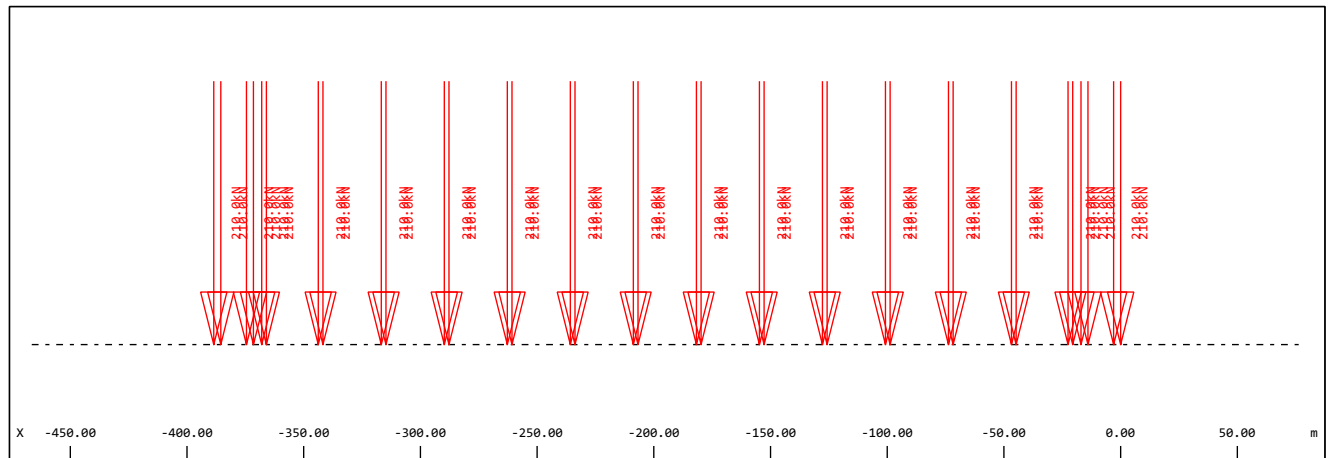
No.	LC	λ [rad ² /sec ²]	error [-]	ω [rad/sec]	f [Hz]	T [sec]	ξ [%]	Meff			participation		
								X[%]	Y[%]	Z[%]	X[%]	Y[%]	Z[%]
1	2001	4.0930E+01	0.0E+00	6.398	1.018	0.982	0.000	0.0	0.0	0.0	0.0	0.0	0.0
2	2002	6.6873E+01	0.0E+00	8.178	1.302	0.768	0.000	0.2	0.0	40.4	0.2	0.0	40.9
3	2003	1.6374E+02	0.0E+00	12.796	2.037	0.491	0.000	0.0	0.0	0.0	0.0	0.0	0.0
4	2004	1.8989E+02	0.0E+00	13.780	2.193	0.456	0.000	0.0	0.0	28.0	0.0	0.0	28.3
5	2005	2.2632E+02	0.0E+00	15.044	2.394	0.418	0.000	0.1	0.0	0.3	0.1	0.0	0.3
6	2006	3.6848E+02	0.0E+00	19.196	3.055	0.327	0.000	0.0	0.0	0.0	0.0	0.0	0.0
7	2007	3.9126E+02	0.0E+00	19.780	3.148	0.318	0.000	10.9	0.0	0.5	11.0	0.0	0.5
8	2008	4.1405E+02	0.0E+00	20.348	3.239	0.309	0.000	0.0	11.8	0.0	0.0	12.1	0.0
9	2009	4.2885E+02	0.0E+00	20.709	3.296	0.303	0.000	1.5	0.0	0.7	1.5	0.0	0.7
10	2010	6.5524E+02	0.0E+00	25.598	4.074	0.245	0.000	0.0	0.0	0.0	0.0	0.0	0.0
11	2011	7.2515E+02	0.0E+00	26.929	4.286	0.233	0.000	0.0	0.0	4.4	0.0	0.0	4.4
12	2012	1.0242E+03	0.0E+00	32.002	5.093	0.196	0.000	0.0	0.0	0.0	0.0	0.0	0.0
13	2013	1.1894E+03	0.0E+00	34.487	5.489	0.182	0.000	0.0	0.0	0.8	0.0	0.0	0.8
14	2014	1.4754E+03	0.0E+00	38.411	6.113	0.164	0.000	0.0	0.0	0.0	0.0	0.0	0.0
15	2015	1.5035E+03	0.0E+00	38.776	6.171	0.162	0.000	0.0	61.5	0.0	0.0	62.8	0.0
16	2016	2.0091E+03	0.0E+00	44.823	7.134	0.140	0.000	0.0	0.0	0.0	0.0	0.0	0.0
17	2017	2.0132E+03	0.0E+00	44.869	7.141	0.140	0.000	0.0	0.0	2.3	0.0	0.0	2.3
18	2018	2.6256E+03	0.0E+00	51.241	8.155	0.123	0.000	0.0	0.0	0.0	0.0	0.0	0.0
19	2019	3.2640E+03	5.7E-14	57.131	9.093	0.110	0.000	0.6	0.0	0.2	0.6	0.0	0.2
20	2020	3.3251E+03	1.8E-14	57.664	9.178	0.109	0.000	0.0	0.0	0.0	0.0	0.0	0.0
21	2021	3.3324E+03	2.4E-12	57.727	9.188	0.109	0.000	0.1	0.0	0.2	0.1	0.0	0.2
22	2022	4.1080E+03	3.5E-13	64.094	10.201	0.098	0.000	0.0	0.0	0.0	0.0	0.0	0.0
23	2023	4.3098E+03	4.1E-10	65.649	10.448	0.096	0.000	0.0	0.1	0.0	0.0	0.1	0.0
24	2024	4.9746E+03	3.2E-10	70.531	11.225	0.089	0.000	0.0	0.0	0.0	0.0	0.0	0.0
25	2025	5.0775E+03	1.1E-08	71.257	11.341	0.088	0.000	0.0	0.0	0.9	0.0	0.0	0.9
26		5.9252E+03	2.2E-08	76.975	12.251	0.082	$\Sigma(\%)^1$	13.4	73.4	78.5	13.5	75.0	79.5
27		6.9552E+03	3.1E-04	83.398	13.273	0.075							
28		6.9603E+03	4.5E-05	83.428	13.278	0.075							
29		7.7957E+03	6.4E-03	88.293	14.052	0.071							
30		8.0803E+03	1.0E-04	89.891	14.307	0.070							
31		9.2858E+03	1.2E-04	96.363	15.337	0.065							
32		1.0578E+04	3.6E-03	102.850	16.369	0.061							
33		1.1686E+04	9.4E-02	108.103	17.205	0.058							
34		1.1949E+04	1.2E-02	109.310	17.397	0.057							
35		1.3429E+04	1.7E-02	115.884	18.443	0.054							
36		1.6536E+04	5.4E-02	128.593	20.466	0.049							
37		1.8026E+04	1.9E-01	134.261	21.368	0.047							
38		1.8688E+04	1.9E-01	136.705	21.757	0.046							
39		2.2489E+04	3.1E-01	149.965	23.868	0.042							
40		2.6454E+04	7.9E-02	162.646	25.886	0.039							
41		3.6207E+04	3.9E-01	190.282	30.284	0.033							
42		4.1370E+04	2.4E-01	203.397	32.372	0.031							
43		5.4925E+04	3.4E-01	234.360	37.300	0.027							
44		7.5701E+04	3.0E-01	275.138	43.790	0.023							
45		1.0473E+05	3.3E-01	323.623	51.506	0.019							
46		1.6558E+05	5.2E-01	406.916	64.763	0.015							
47		3.4613E+05	6.8E-01	588.330	93.636	0.011							
48		4.3300E+05	1.1E+00	658.026	104.728	0.010							
49		1.1834E+06	1.6E+00	1087.836	173.134	0.006							
50		3.1339E+07	6.8E+00	5598.088	890.963	0.001							

¹ Total effective mass / participation factors of activated masses in X-, Y- and Z-direction.

No.	eigenmode number	f	eigenfrequency
LC	load case	T	eigenperiod
λ	eigenvalue	ξ	modal damping ratio
error	relative eigenvalue error	Meff	effective modal mass in X-, Y- and Z-direction
ω	circular eigenfrequency	participation	participation factors in X-, Y- and Z-direction

DEVELOPMENT OF STRUCTURE
VEHICLE LOADINGLoad Train 1001 Loadtrain HSML A1
HSLA A10 EN 1991-2 6.4.6 (HSLM-A)

Load elements of Load Train	Load value	Remark
Type / L-lambda	A10	
Axle load	210.0 [kN]	
Interm. coaches	11.000 [-]	
Coach length	27.000 [m]	
Wind Load Height	4.000 [m]	
Brake load	20.00 [kN/m]	
Gravity center	1.800 [m]	
Total factor	1.000 [-]	
Width of loading	-1.435 [m]	
Fact.centrifugal	1.000 [-]	



EN 1991-2 6.4.6 (HSLM-A)

Load elements of Load Train

P	Pv [kN]	Pl [kN]	Pw [kN]	Pf [kN]	ffav [-]	X[m]	L[m]	y[m]	hw[m]	hs[m]	b[m] bw[m]	cont@ lw[m]
+2P	210.0	0.0	0.0	210.0	1.0	0.000		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-3.000		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-14.000		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-17.000		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-20.525		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-22.525		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-44.762		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-46.762		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-71.762		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-73.762		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-98.762		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-100.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-125.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-127.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-152.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-154.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-179.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-181.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-206.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-208.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-233.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-235.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-260.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-262.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-287.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-289.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-314.76		0.000	0.000	1.800	1.435	

DEVELOPMENT OF STRUCTURE
VEHICLE LOADING

Load elements of Load Train

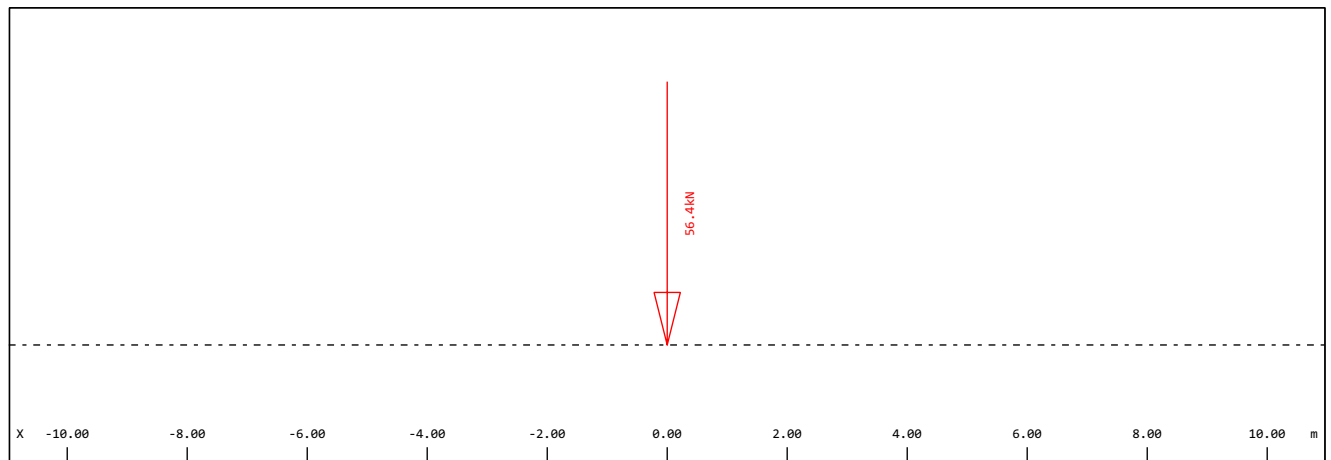
P	Pv [kN]	P1 [kN]	Pw [kN]	Pf [kN]	ffav [-]	X[m]	L[m]	y[m]	hw[m]	hs[m]	b[m] bw[m]	cont@ lw[m]
+2P	210.0	0.0	0.0	210.0	1.0	-316.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-341.76		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-343.76		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-366.00		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-368.00		0.000	0.000	1.800	1.435	
+2P	210.0	0.0	0.0	210.0	1.0	-371.52		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-374.52		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-385.52		0.000	0.000	1.800	1.435	
2P	210.0	0.0	0.0	210.0	1.0	-388.52		0.000	0.000	1.800	1.435	

Pv	vertical load value	hw[m]	height of lateral acting force
P1	longitudinal load value (breaking)	hs[m]	height of centrifugal mass center
Pw	transverse load value	b[m]	spacing of wheels
Pf	effective load for centrifugal loading	cont@	connected to node number of vehicle model
ffav	factor for favourable load positions	P	load Type (P) = axle/pointload, (B) = distributed load
X[m]	location along load train	bw[m]	width of wheel contact area
L[m]	length of loading	lw[m]	length of wheel contact area
y[m]	excentricity of loading		

Load Train 1002 Sprung Mass

USER User defined

Load elements of Load Train	Load value	Remark
Total factor	1.000 [-]	
Fact.centrifugal	1.000 [-]	
Loading travels in both directions		
Transverse loading in unfavourable direction		



User defined

Load elements of Load Train

P	Pv [kN]	P1 [kN]	Pw [kN]	Pf [kN]	ffav [-]	X[m]	L[m]	y[m]	hw[m]	hs[m]	b[m] bw[m]	cont@ lw[m]
P	56.4	0.0	0.0	56.4	0.0	0.000		0.000	0.000	0.000		501

Pv	vertical load value	hw[m]	height of lateral acting force
P1	longitudinal load value (breaking)	hs[m]	height of centrifugal mass center
Pw	transverse load value	b[m]	spacing of wheels
Pf	effective load for centrifugal loading	cont@	connected to node number of vehicle model
ffav	factor for favourable load positions	P	load Type (P) = axle/pointload, (B) = distributed load
X[m]	location along load train	bw[m]	width of wheel contact area
L[m]	length of loading	lw[m]	length of wheel contact area
y[m]	excentricity of loading		

Loadcase for track irregularities

Factor forces and moments	1.000
---------------------------	-------

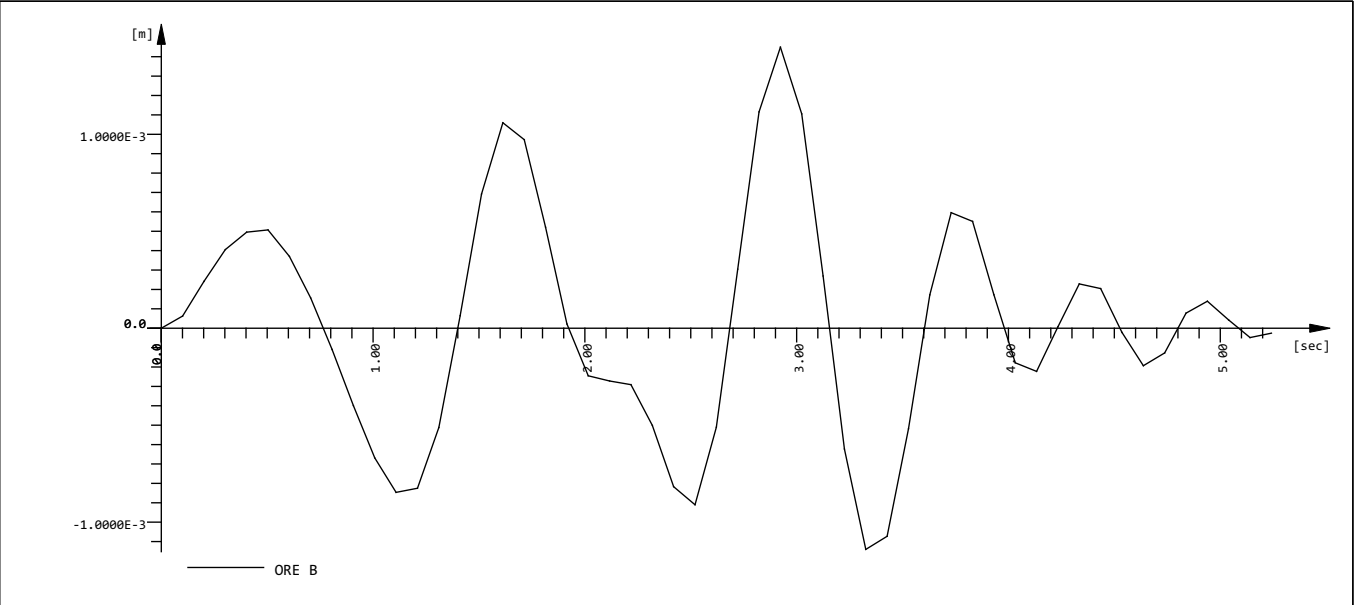
$$Sv(f)$$

DEVELOPMENT OF STRUCTURE
Loadcase for track irregularities

Variation of Loading in Time

frequency	Factor	frequency	Factor	frequency	Factor	frequency	Factor
[1/sec]	[m ² /m]	[1/sec]	[m ² /m]	[1/sec]	[m ² /m]	[1/sec]	[m ² /m]
4.363	0.000	min	0.000	max	0.000	12.459	0.000

Load Case 20000 Irreg. 0, v=50 km/h
Factor forces and moments 1.000

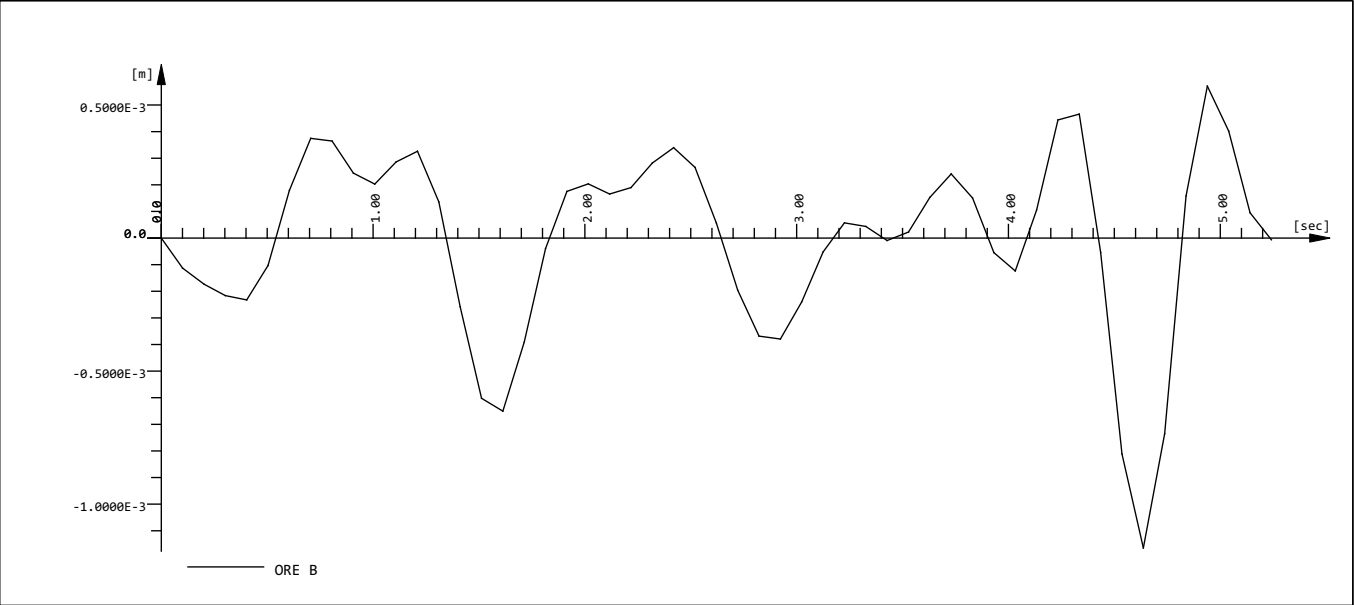


Irreg. 0, v=50 km/h

Variation of Loading in Time ORE B

Time	Factor	Time	Factor	Time	Factor	Time	Factor
[sec]	[m]	[sec]	[m]	[sec]	[m]	[sec]	[m]
0.000	0.000	min	-0.001	max	0.001	5.242	0.000

Load Case 20001 Irreg. 1, v=50 km/h
Factor forces and moments 1.000

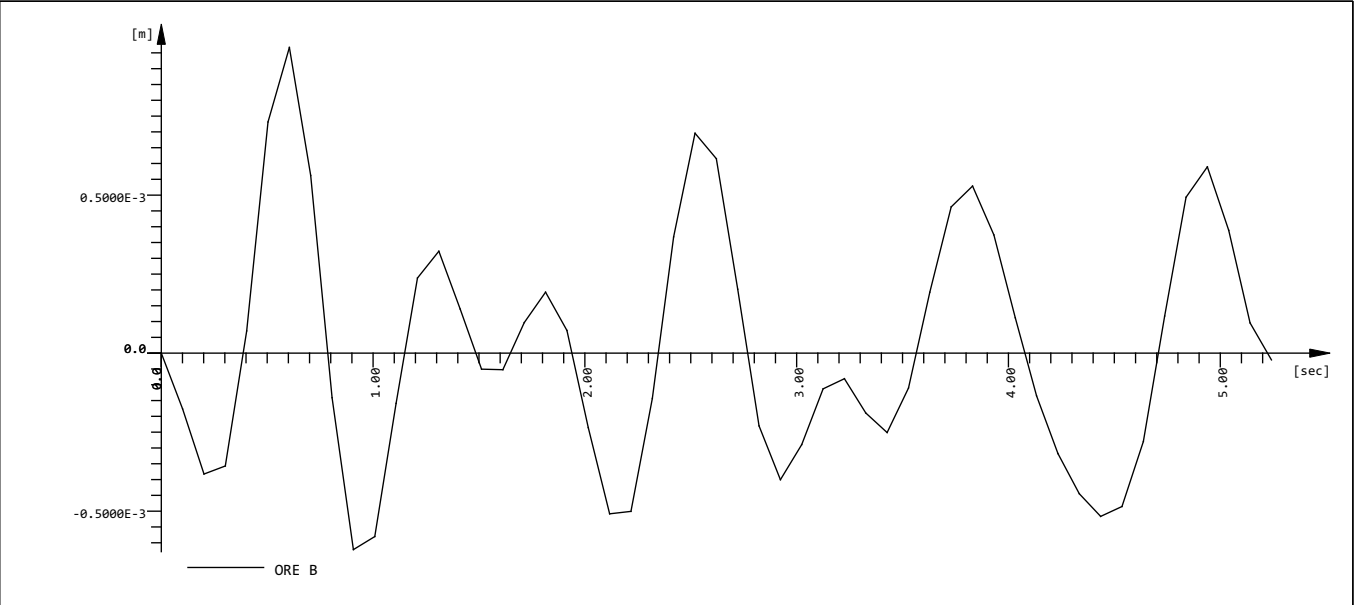


Irreg. 1, v=50 km/h

DEVELOPMENT OF STRUCTURE
Loadcase for track irregularities

Variation of Loading in Time				ORE B			
Time	Factor	Time	Factor	Time	Factor	Time	Factor
[sec]	[m]	[sec]	[m]	[sec]	[m]	[sec]	[m]
0.000	0.000	min	-0.001	max	0.001	5.242	0.000

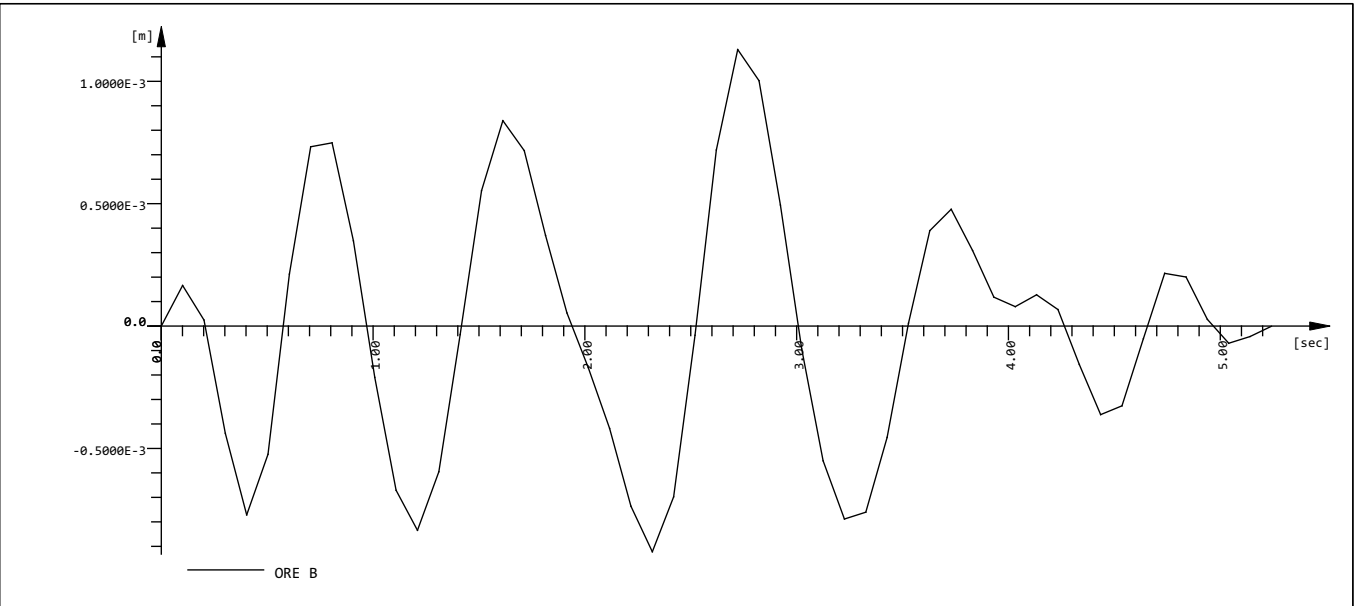
Load Case 20002 Irreg. 2, v=50 km/h
Factor forces and moments 1.000



Irreg. 2, v=50 km/h

Variation of Loading in Time				ORE B			
Time	Factor	Time	Factor	Time	Factor	Time	Factor
[sec]	[m]	[sec]	[m]	[sec]	[m]	[sec]	[m]
0.000	0.000	min	-0.001	max	0.001	5.242	0.000

Load Case 20003 Irreg. 3, v=50 km/h
Factor forces and moments 1.000

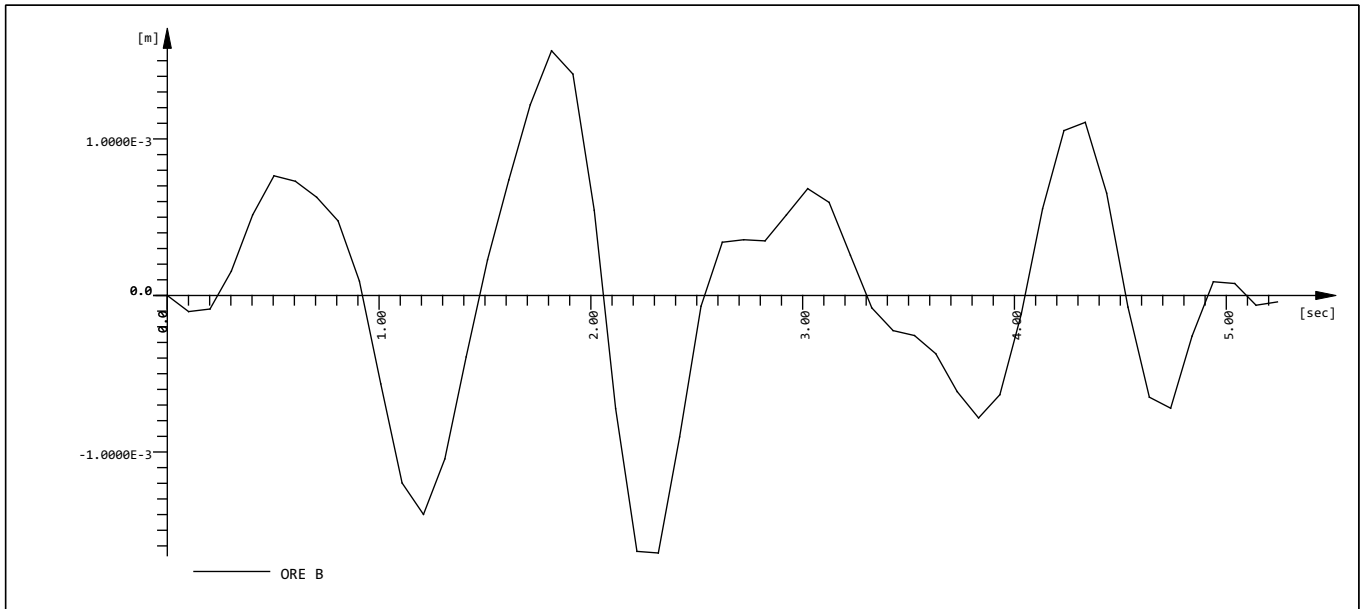


Irreg. 3, v=50 km/h

DEVELOPMENT OF STRUCTURE
Loadcase for track irregularities

Variation of Loading in Time				ORE B			
Time	Factor	Time	Factor	Time	Factor	Time	Factor
[sec]	[m]	[sec]	[m]	[sec]	[m]	[sec]	[m]
0.000	0.000	min	-0.001	max	0.001	5.242	0.000

Load Case 20004 Irreg. 4, v=50 km/h
Factor forces and moments 1.000



Irreg. 4, v=50 km/h

Variation of Loading in Time				ORE B			
Time	Factor	Time	Factor	Time	Factor	Time	Factor
[sec]	[m]	[sec]	[m]	[sec]	[m]	[sec]	[m]
0.000	0.000	min	-0.002	max	0.002	5.242	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

System- and Control Information

Control Information

Number of unknowns	1271
unknowns per node	6
Number of timesteps	5275
Time-step	0.0010
Printing intervall	1
damping factor A	0.000E+00
damping factor B	0.000E+00
Integr.Parameter beta	0.25
Integr.Parameter delta	0.50
Integr.Parameter theta	1.00

Design Code

EuroNorm Bridges: NS EN 1992-2/NA:2010, NS EN 1993-2/NA:2009, NS EN 1994-2/NA:2009 (Norge) V 2025
Konstruksjon: D (Jernbanebruer)

Snow load zone : 1

Materials

Mat	Classification
1	C 55/67 (EN 1992)
2	B 500 B (EN 1992)
3	=Macalloy 520

Sectional Values

SNo	Mat	A[m ²]	Ay[m ²]	Iy[m ⁴]	yc[mm]	ysc[mm]	E[N/mm ²]	g[kg/m]	I-1[m ⁴]
	MRf	It[m ⁴]	Az[m ²]	Iz[m ⁴]	zc[mm]	zsc[mm]	G[N/mm ²]		I-2[m ⁴]
		Ayz[m ²]		Iyz[m ⁴]					α[°]
1	1	5.3600E+00	4.467E+00	7.147E-02	0.0	0.0	38214	13400.0	8.020E+01
	2 ¹	2.805E-01	4.467E+00	8.020E+01	0.0	0.0	15923	(CENTR)	7.146E-02
= B/H = 13400 / 400 mm									
= (D-As 40 / 40 mm)									
2	2	7.8540E-01	7.069E-01	4.909E-02	0.0	0.0	200000	6165.4	
		9.817E-02	7.069E-01	4.909E-02	0.0	0.0	76923	(COMPR)	
= D 1000 mm									
3	3	7.8540E-03	7.069E-03	4.909E-06	0.0	0.0	210000	61.7	
		9.817E-06	7.069E-03	4.909E-06	0.0	0.0	81000	(COMPR)	
= D 100 mm									
4	3	5.6745E-03	5.107E-03	2.562E-06	0.0	0.0	210000	44.5	
		5.125E-06	5.107E-03	2.562E-06	0.0	0.0	81000	(COMPR)	
= D 85 mm									
5	3	4.5365E-03	4.083E-03	1.638E-06	0.0	0.0	210000	35.6	
		3.275E-06	4.083E-03	1.638E-06	0.0	0.0	81000	(COMPR)	
= D 76 mm									
¹ Reinforcements are not considered in the sectional values									
SNo	section number			yc[mm],zc[mm]		ordinate of elastic centroid			
Mat	material number			ysc[mm],zsc[mm]		ordinate of shear centre			
A[m ²]	sectional area			E[N/mm ²]		Young's modulus			
Ay[m ²],Az[m ²],Ayz[m ²]	transverse shear deformation area			g[kg/m]		mass per length			
Iy[m ⁴],Iz[m ⁴],Iyz[m ⁴]	bending moment of inertia								
I-1[m ⁴],I-2[m ⁴],α[°]	principal moments of inertia and angle of the principal axes								
MRf	reinforcement material number								
It[m ⁴]	torsional moment of inertia								
G[N/mm ²]	Shear modulus								

Groups

Grp	Option	CS	Factor	Rayleigh-A [Hz]	Rayleigh-B [msec]	ξ [%]	Wind
0	FULL		1.000	0.000	0.000	0.00	
1	FULL		1.000	0.038	9.602	0.00	
102	FULL		1.000	0.000	0.000	0.00	
201	FULL		1.000	0.000	0.000	0.00	0 0.000
202	FULL		1.000	0.000	0.000	0.00	0 0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Groups

Grp	Option	CS	Factor	Rayleigh-A [Hz]	Rayleigh-B [msec]	ξ [%]	Wind
203	FULL		1.000	0.000	0.000	0.00	0 0.000
204	FULL		1.000	0.000	0.000	0.00	0 0.000
205	FULL		1.000	0.000	0.000	0.00	0 0.000
206	FULL		1.000	0.000	0.000	0.00	0 0.000
207	FULL		1.000	0.000	0.000	0.00	0 0.000
301	FULL		1.000	0.000	0.000	0.00	0 0.000
302	FULL		1.000	0.000	0.000	0.00	0 0.000
303	FULL		1.000	0.000	0.000	0.00	0 0.000
304	FULL		1.000	0.000	0.000	0.00	0 0.000
305	FULL		1.000	0.000	0.000	0.00	0 0.000
600	FULL		1.000	0.000	0.000	0.00	
CS construction stage							
Factor Factor on stiffness				Rayleigh-B stiffness proportional damping ratio			
Rayleigh-A mass proportional damping ratio				ξ modal damping ratio			
				Wind options for dynamic wind loading			

Nodes

Number	X[m]	Y[m]	Z[m]	eq.PX	eq.PY	eq.PZ	eq.MX	eq.MY	eq.MZ
1	0.000	0.000	0.000	1	PY	PZ	MX	2	3
2	10.319	0.000	0.000	4	5	6	7	8	9
3	17.643	0.000	0.000	10	11	12	13	14	15
4	24.967	0.000	0.000	16	17	18	19	20	21
5	32.291	0.000	0.000	22	23	24	25	26	27
6	39.615	0.000	0.000	28	29	30	31	32	33
7	46.939	0.000	0.000	34	35	36	37	38	39
8	54.263	0.000	0.000	40	41	42	43	44	45
9	61.587	0.000	0.000	46	47	48	49	50	51
10	73.256	0.000	0.000	PX	PY	PZ	MX	MY	MZ
11	73.256	0.000	0.000	PX	PY	PZ	MX	MY	MZ
12	74.887	0.000	0.000	PX	PY	PZ	MX	MY	MZ
13	76.517	0.000	0.000	PX	PY	PZ	MX	MY	MZ
14	78.148	0.000	0.000	PX	PY	PZ	MX	MY	MZ
15	79.778	0.000	0.000	PX	PY	PZ	MX	MY	MZ
101	54.263	0.100	-4.295	PX	PY	PZ	MX	MY	MZ
102	54.263	0.100	26.585	52	PY	53	54	55	56
103	0.491	0.000	0.000	57	58	59	60	61	62
104	0.983	0.000	0.000	63	64	65	66	67	68
105	1.474	0.000	0.000	69	70	71	72	73	74
106	1.966	0.000	0.000	75	76	77	78	79	80
107	2.457	0.000	0.000	81	82	83	84	85	86
108	2.948	0.000	0.000	87	88	89	90	91	92
109	3.440	0.000	0.000	93	94	95	96	97	98
110	3.931	0.000	0.000	99	100	101	102	103	104
111	4.422	0.000	0.000	105	106	107	108	109	110
112	4.914	0.000	0.000	111	112	113	114	115	116
113	5.405	0.000	0.000	117	118	119	120	121	122
114	5.897	0.000	0.000	123	124	125	126	127	128
115	6.388	0.000	0.000	129	130	131	132	133	134
116	6.879	0.000	0.000	135	136	137	138	139	140
117	7.371	0.000	0.000	141	142	143	144	145	146
118	7.862	0.000	0.000	147	148	149	150	151	152
119	8.353	0.000	0.000	153	154	155	156	157	158
120	8.845	0.000	0.000	159	160	161	162	163	164
121	9.336	0.000	0.000	165	166	167	168	169	170
122	9.828	0.000	0.000	171	172	173	174	175	176
123	10.807	0.000	0.000	177	178	179	180	181	182
124	11.296	0.000	0.000	183	184	185	186	187	188
125	11.784	0.000	0.000	189	190	191	192	193	194
126	12.272	0.000	0.000	195	196	197	198	199	200

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodes

Number	X[m]	Y[m]	Z[m]	eq.PX	eq.PY	eq.PZ	eq.MX	eq.MY	eq.MZ
127	12.760	0.000	0.000	201	202	203	204	205	206
128	13.249	0.000	0.000	207	208	209	210	211	212
129	13.737	0.000	0.000	213	214	215	216	217	218
130	14.225	0.000	0.000	219	220	221	222	223	224
131	14.713	0.000	0.000	225	226	227	228	229	230
132	15.202	0.000	0.000	231	232	233	234	235	236
133	15.690	0.000	0.000	237	238	239	240	241	242
134	16.178	0.000	0.000	243	244	245	246	247	248
135	16.666	0.000	0.000	249	250	251	252	253	254
136	17.155	0.000	0.000	255	256	257	258	259	260
137	18.131	0.000	0.000	261	262	263	264	265	266
138	18.620	0.000	0.000	267	268	269	270	271	272
139	19.108	0.000	0.000	273	274	275	276	277	278
140	19.596	0.000	0.000	279	280	281	282	283	284
141	20.084	0.000	0.000	285	286	287	288	289	290
142	20.573	0.000	0.000	291	292	293	294	295	296
143	21.061	0.000	0.000	297	298	299	300	301	302
144	21.549	0.000	0.000	303	304	305	306	307	308
145	22.037	0.000	0.000	309	310	311	312	313	314
146	22.526	0.000	0.000	315	316	317	318	319	320
147	23.014	0.000	0.000	321	322	323	324	325	326
148	23.502	0.000	0.000	327	328	329	330	331	332
149	23.990	0.000	0.000	333	334	335	336	337	338
150	24.479	0.000	0.000	339	340	341	342	343	344
151	25.455	0.000	0.000	345	346	347	348	349	350
152	25.944	0.000	0.000	351	352	353	354	355	356
153	26.432	0.000	0.000	357	358	359	360	361	362
154	26.920	0.000	0.000	363	364	365	366	367	368
155	27.408	0.000	0.000	369	370	371	372	373	374
156	27.897	0.000	0.000	375	376	377	378	379	380
157	28.385	0.000	0.000	381	382	383	384	385	386
158	28.873	0.000	0.000	387	388	389	390	391	392
159	29.361	0.000	0.000	393	394	395	396	397	398
160	29.850	0.000	0.000	399	400	401	402	403	404
161	30.338	0.000	0.000	405	406	407	408	409	410
162	30.826	0.000	0.000	411	412	413	414	415	416
163	31.314	0.000	0.000	417	418	419	420	421	422
164	31.803	0.000	0.000	423	424	425	426	427	428
165	32.779	0.000	0.000	429	430	431	432	433	434
166	33.268	0.000	0.000	435	436	437	438	439	440
167	33.756	0.000	0.000	441	442	443	444	445	446
168	34.244	0.000	0.000	447	448	449	450	451	452
169	34.732	0.000	0.000	453	454	455	456	457	458
170	35.221	0.000	0.000	459	460	461	462	463	464
171	35.709	0.000	0.000	465	466	467	468	469	470
172	36.197	0.000	0.000	471	472	473	474	475	476
173	36.685	0.000	0.000	477	478	479	480	481	482
174	37.174	0.000	0.000	483	484	485	486	487	488
175	37.662	0.000	0.000	489	490	491	492	493	494
176	38.150	0.000	0.000	495	496	497	498	499	500
177	38.638	0.000	0.000	501	502	503	504	505	506
178	39.127	0.000	0.000	507	508	509	510	511	512
179	40.103	0.000	0.000	513	514	515	516	517	518
180	40.592	0.000	0.000	519	520	521	522	523	524
181	41.080	0.000	0.000	525	526	527	528	529	530
182	41.568	0.000	0.000	531	532	533	534	535	536
183	42.056	0.000	0.000	537	538	539	540	541	542
184	42.545	0.000	0.000	543	544	545	546	547	548

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodes

Number	X[m]	Y[m]	Z[m]	eq.PX	eq.PY	eq.PZ	eq.MX	eq.MY	eq.MZ
185	43.033	0.000	0.000	549	550	551	552	553	554
186	43.521	0.000	0.000	555	556	557	558	559	560
187	44.009	0.000	0.000	561	562	563	564	565	566
188	44.498	0.000	0.000	567	568	569	570	571	572
189	44.986	0.000	0.000	573	574	575	576	577	578
190	45.474	0.000	0.000	579	580	581	582	583	584
191	45.962	0.000	0.000	585	586	587	588	589	590
192	46.451	0.000	0.000	591	592	593	594	595	596
193	47.427	0.000	0.000	597	598	599	600	601	602
194	47.916	0.000	0.000	603	604	605	606	607	608
195	48.404	0.000	0.000	609	610	611	612	613	614
196	48.892	0.000	0.000	615	616	617	618	619	620
197	49.380	0.000	0.000	621	622	623	624	625	626
198	49.869	0.000	0.000	627	628	629	630	631	632
199	50.357	0.000	0.000	633	634	635	636	637	638
200	50.845	0.000	0.000	639	640	641	642	643	644
201	51.333	0.000	0.000	645	646	647	648	649	650
202	51.822	0.000	0.000	651	652	653	654	655	656
203	52.310	0.000	0.000	657	658	659	660	661	662
204	52.798	0.000	0.000	663	664	665	666	667	668
205	53.286	0.000	0.000	669	670	671	672	673	674
206	53.775	0.000	0.000	675	676	677	678	679	680
207	54.751	0.000	0.000	681	682	683	684	685	686
208	55.240	0.000	0.000	687	688	689	690	691	692
209	55.728	0.000	0.000	693	694	695	696	697	698
210	56.216	0.000	0.000	699	700	701	702	703	704
211	56.704	0.000	0.000	705	706	707	708	709	710
212	57.193	0.000	0.000	711	712	713	714	715	716
213	57.681	0.000	0.000	717	718	719	720	721	722
214	58.169	0.000	0.000	723	724	725	726	727	728
215	58.657	0.000	0.000	729	730	731	732	733	734
216	59.146	0.000	0.000	735	736	737	738	739	740
217	59.634	0.000	0.000	741	742	743	744	745	746
218	60.122	0.000	0.000	747	748	749	750	751	752
219	60.610	0.000	0.000	753	754	755	756	757	758
220	61.099	0.000	0.000	759	760	761	762	763	764
221	62.094	0.000	0.000	765	766	767	768	769	770
222	62.602	0.000	0.000	771	772	773	774	775	776
223	63.109	0.000	0.000	777	778	779	780	781	782
224	63.616	0.000	0.000	783	784	785	786	787	788
225	64.124	0.000	0.000	789	790	791	792	793	794
226	64.631	0.000	0.000	795	796	797	798	799	800
227	65.138	0.000	0.000	801	802	803	804	805	806
228	65.646	0.000	0.000	807	808	809	810	811	812
229	66.153	0.000	0.000	813	814	815	816	817	818
230	66.660	0.000	0.000	819	820	821	822	823	824
231	67.168	0.000	0.000	825	826	827	828	829	830
232	67.675	0.000	0.000	831	832	833	834	835	836
233	68.183	0.000	0.000	837	838	839	840	841	842
234	68.690	0.000	0.000	843	844	845	846	847	848
235	69.197	0.000	0.000	849	850	851	852	853	854
236	69.705	0.000	0.000	855	856	857	858	859	860
237	70.212	0.000	0.000	861	862	863	864	865	866
238	70.719	0.000	0.000	867	868	869	870	871	872
239	71.227	0.000	0.000	873	874	875	876	877	878
240	71.734	0.000	0.000	879	880	881	882	883	884
241	72.241	0.000	0.000	885	886	887	888	889	890
242	72.749	0.000	0.000	891	892	893	894	895	896

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodes

Number	X[m]	Y[m]	Z[m]	eq.PX	eq.PY	eq.PZ	eq.MX	eq.MY	eq.MZ
243	54.263	0.100	-3.797	897	898	899	900	901	902
244	54.263	0.100	-3.299	903	904	905	906	907	908
245	54.263	0.100	-2.801	909	910	911	912	913	914
246	54.263	0.100	-2.303	915	916	917	918	919	920
247	54.263	0.100	-1.805	921	922	923	924	925	926
248	54.263	0.100	-1.307	927	928	929	930	931	932
249	54.263	0.100	-0.809	933	934	935	936	937	938
250	54.263	0.100	-0.310	939	940	941	942	943	944
251	54.263	0.100	0.188	945	946	947	948	949	950
252	54.263	0.100	0.686	951	952	953	954	955	956
253	54.263	0.100	1.184	957	958	959	960	961	962
254	54.263	0.100	1.682	963	964	965	966	967	968
255	54.263	0.100	2.180	969	970	971	972	973	974
256	54.263	0.100	2.678	975	976	977	978	979	980
257	54.263	0.100	3.176	981	982	983	984	985	986
258	54.263	0.100	3.674	987	988	989	990	991	992
259	54.263	0.100	4.172	993	994	995	996	997	998
260	54.263	0.100	4.670	999	1000	1001	1002	1003	1004
261	54.263	0.100	5.168	1005	1006	1007	1008	1009	1010
262	54.263	0.100	5.666	1011	1012	1013	1014	1015	1016
263	54.263	0.100	6.164	1017	1018	1019	1020	1021	1022
264	54.263	0.100	6.662	1023	1024	1025	1026	1027	1028
265	54.263	0.100	7.160	1029	1030	1031	1032	1033	1034
266	54.263	0.100	7.659	1035	1036	1037	1038	1039	1040
267	54.263	0.100	8.157	1041	1042	1043	1044	1045	1046
268	54.263	0.100	8.655	1047	1048	1049	1050	1051	1052
269	54.263	0.100	9.153	1053	1054	1055	1056	1057	1058
270	54.263	0.100	9.651	1059	1060	1061	1062	1063	1064
271	54.263	0.100	10.149	1065	1066	1067	1068	1069	1070
272	54.263	0.100	10.647	1071	1072	1073	1074	1075	1076
273	54.263	0.100	11.145	1077	1078	1079	1080	1081	1082
274	54.263	0.100	11.643	1083	1084	1085	1086	1087	1088
275	54.263	0.100	12.141	1089	1090	1091	1092	1093	1094
276	54.263	0.100	12.639	1095	1096	1097	1098	1099	1100
277	54.263	0.100	13.137	1101	1102	1103	1104	1105	1106
278	54.263	0.100	13.635	1107	1108	1109	1110	1111	1112
279	54.263	0.100	14.133	1113	1114	1115	1116	1117	1118
280	54.263	0.100	14.631	1119	1120	1121	1122	1123	1124
281	54.263	0.100	15.130	1125	1126	1127	1128	1129	1130
282	54.263	0.100	15.628	1131	1132	1133	1134	1135	1136
283	54.263	0.100	16.126	1137	1138	1139	1140	1141	1142
284	54.263	0.100	16.624	1143	1144	1145	1146	1147	1148
285	54.263	0.100	17.122	1149	1150	1151	1152	1153	1154
286	54.263	0.100	17.620	1155	1156	1157	1158	1159	1160
287	54.263	0.100	18.118	1161	1162	1163	1164	1165	1166
288	54.263	0.100	18.616	1167	1168	1169	1170	1171	1172
289	54.263	0.100	19.114	1173	1174	1175	1176	1177	1178
290	54.263	0.100	19.612	1179	1180	1181	1182	1183	1184
291	54.263	0.100	20.110	1185	1186	1187	1188	1189	1190
292	54.263	0.100	20.608	1191	1192	1193	1194	1195	1196
293	54.263	0.100	21.106	1197	1198	1199	1200	1201	1202
294	54.263	0.100	21.604	1203	1204	1205	1206	1207	1208
295	54.263	0.100	22.102	1209	1210	1211	1212	1213	1214
296	54.263	0.100	22.600	1215	1216	1217	1218	1219	1220
297	54.263	0.100	23.099	1221	1222	1223	1224	1225	1226
298	54.263	0.100	23.597	1227	1228	1229	1230	1231	1232
299	54.263	0.100	24.095	1233	1234	1235	1236	1237	1238
300	54.263	0.100	24.593	1239	1240	1241	1242	1243	1244

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodes

Number	X[m]	Y[m]	Z[m]	eq.PX	eq.PY	eq.PZ	eq.MX	eq.MY	eq.MZ
301	54.263	0.100	25.091	1245	1246	1247	1248	1249	1250
302	54.263	0.100	25.589	1251	1252	1253	1254	1255	1256
303	54.263	0.100	26.087	1257	1258	1259	1260	1261	1262
501	-1.000	0.000	0.000	-1	PY	1263	1264	1265	1266
502	-1.000	0.000	1.000	1267	PY	1268	1269	1270	1271
MIN	-1.000	0.000	-4.295	-1					
MAX	79.778	0.100	26.585	1271					

Explicit Kinematic Constraints

Grp	Node	DoF	equation
600	501	PX	1.000*uX@502
Grp primary group number DoF dependent degree of freedom equation DoF = Fac1 * DoF1@node1 + Fac2 * DoF2@node2 + ...			

Beam Elements

Finite beam elements without intermediate sections

Shear deformations accounted for with nonconforming SOFiSTiK-Timoshenko beam

Truss Elements

Grp	Number	Node	Node	section	L[m]	VOR[kN]
201	10001	2	102	3	51.360	
202	20001	3	102	3	45.253	
203	30001	4	102	4	39.560	
204	40001	5	102	4	34.490	
205	50001	6	102	4	30.354	
206	60001	7	102	5	27.576	
207	70001	9	102	5	27.576	
301	10001	11	102	5	32.673	
302	20001	12	102	5	33.647	
303	30001	13	102	4	34.670	
304	40001	14	102	3	35.739	
305	50001	15	102	3	36.848	

Nodal Masses

Node	TM			RM			RMB [tm²]
	X[t]	Y[t]	Z[t]	X[tm²]	Y[tm²]	Z[tm²]	
502	5.750	5.750	5.750	0.000	0.000	0.000	-
TM translational masses in X-, Y- and Z-direction RM rotational masses about X-, Y- and Z-axis RMB warping mass							

Sum of masses and mass moments of inertia

Node	TM			RM			RMB [tm²]
	X[t]	Y[t]	Z[t]	X[tm²]	Y[tm²]	Z[tm²]	
total ¹	1198.720	1198.720	1198.720	1.471E+04	2.499E+01	1.471E+04	-
	S[m] ²			RM(S) ³			
	39.492	0.017	2.007	4.137E+04	2.967E+02	3.522E+04	
				2.967E+02	5.502E+05	1.997E+02	
				3.522E+04	1.997E+02	5.088E+05	
active ¹	1189.594	1168.541	1186.302	1.461E+04	2.485E+01	1.466E+04	-
	S[m] ²			RM(S) ³			
	39.244	0.016	2.034	3.284E+04	3.353E+02	2.001E+04	
				3.353E+02	5.449E+05	2.019E+02	
				2.001E+04	2.019E+02	4.956E+05	

¹ sum of the total and the active nodal masses² coordinates of the center of gravity³ 3x3 rotational mass matrix at the center of gravity

TM translational masses in X-, Y- and Z-direction

RM rotational masses about X-, Y- and Z-axis

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

RMB warping mass

Processing

Load Cases

-- Loadcase 1002 Sprung Mass

function	Time	Node	Time	Node	Time	Node	Time	Node
Loadtrain along 999, V= 50.0 [km/h], Y= 0.000 [m], imp-v =20002								
	0.0000	1	0.0354	103	0.0708	104	0.1061	105
	0.1415	106	0.1769	107	0.2123	108	0.2477	109
	0.2830	110	0.3184	111	0.3538	112	0.3892	113
	0.4246	114	0.4599	115	0.4953	116	0.5307	117
	0.5661	118	0.6015	119	0.6368	120	0.6722	121

...

-- Loadcase20000 Irreg. 0, v=50 km/h

function	Time	Factor	Time	Factor	Time	Factor	Time	Factor
	0.0000	0.000	0.1008	0.000	0.2016	0.000	0.3024	0.000
	0.4032	0.000	0.5040	0.001	0.6048	0.000	0.7056	0.000
	0.8064	-0.000	0.9072	-0.000	1.0080	-0.001	1.1088	-0.001
	1.2096	-0.001	1.3104	-0.001	1.4112	0.000	1.5120	0.001
	1.6128	0.001	1.7136	0.001	1.8144	0.001	1.9152	0.000

...

-- Loadcase20001 Irreg. 1, v=50 km/h

function	Time	Factor	Time	Factor	Time	Factor	Time	Factor
	0.0000	0.000	0.1008	-0.000	0.2016	-0.000	0.3024	-0.000
	0.4032	-0.000	0.5040	-0.000	0.6048	0.000	0.7056	0.000
	0.8064	0.000	0.9072	0.000	1.0080	0.000	1.1088	0.000
	1.2096	0.000	1.3104	0.000	1.4112	-0.000	1.5120	-0.001
	1.6128	-0.001	1.7136	-0.000	1.8144	0.000	1.9152	0.000

...

-- Loadcase20002 Irreg. 2, v=50 km/h

function	Time	Factor	Time	Factor	Time	Factor	Time	Factor
	0.0000	0.000	0.1008	-0.000	0.2016	-0.000	0.3024	-0.000
	0.4032	0.000	0.5040	0.001	0.6048	0.001	0.7056	0.001
	0.8064	-0.000	0.9072	-0.001	1.0080	-0.001	1.1088	-0.000
	1.2096	0.000	1.3104	0.000	1.4112	0.000	1.5120	0.000
	1.6128	0.000	1.7136	0.000	1.8144	0.000	1.9152	0.000

...

Parameter of System of Equations

Number of unknowns	1271 (Direct sparse Gauss-Solver)
Total entries	3838
Total entries after fill in	5962
Mass matrix	2535 (consistent), incl. rotational masses
Damping matrix	2903 (consistent)

Results

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
1	0.021	0.000	0.000	0.000	0.492	0.000
	-0.003	0.000	0.000	0.000	-0.053	0.000
2	0.021	0.000	0.445	0.000	0.220	0.000
	-0.003	0.000	-3.518	0.000	-0.051	0.000
3	0.021	0.000	0.532	0.000	0.123	0.000
	-0.003	0.000	-3.755	0.000	-0.184	0.000
4	0.019	0.000	0.485	0.000	0.082	0.000
	-0.003	0.000	-2.908	0.000	-0.202	0.000
5	0.017	0.000	0.377	0.000	0.069	0.000
	-0.002	0.000	-2.143	0.000	-0.171	0.000
6	0.014	0.000	0.145	0.000	0.102	0.000
	-0.002	0.000	-1.315	0.000	-0.146	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
7	0.011	0.000	0.032	0.000	0.171	0.000
	-0.002	0.000	-1.244	0.000	-0.105	0.000
8	0.008	0.000	0.144	0.000	0.088	0.000
	-0.001	0.000	-1.878	0.000	-0.091	0.000
9	0.005	0.000	0.182	0.000	0.033	0.000
	-0.001	0.000	-1.171	0.000	-0.170	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
101	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
102	0.204	0.000	0.002	0.000	0.011	0.000
	-1.104	0.000	-0.033	0.000	-0.052	0.000
103	0.021	0.000	0.026	0.000	0.491	0.000
	-0.003	0.000	-0.242	0.000	-0.053	0.000
104	0.021	0.000	0.052	0.000	0.488	0.000
	-0.003	0.000	-0.483	0.000	-0.053	0.000
105	0.021	0.000	0.078	0.000	0.482	0.000
	-0.003	0.000	-0.721	0.000	-0.052	0.000
106	0.021	0.000	0.104	0.000	0.475	0.000
	-0.003	0.000	-0.957	0.000	-0.052	0.000
107	0.021	0.000	0.129	0.000	0.465	0.000
	-0.003	0.000	-1.188	0.000	-0.051	0.000
108	0.021	0.000	0.154	0.000	0.453	0.000
	-0.003	0.000	-1.414	0.000	-0.050	0.000
109	0.021	0.000	0.178	0.000	0.439	0.000
	-0.003	0.000	-1.633	0.000	-0.049	0.000
110	0.021	0.000	0.202	0.000	0.423	0.000
	-0.003	0.000	-1.845	0.000	-0.048	0.000
111	0.021	0.000	0.226	0.000	0.406	0.000
	-0.003	0.000	-2.049	0.000	-0.047	0.000
112	0.021	0.000	0.249	0.000	0.386	0.000
	-0.003	0.000	-2.243	0.000	-0.046	0.000
113	0.021	0.000	0.271	0.000	0.365	0.000
	-0.003	0.000	-2.427	0.000	-0.044	0.000
114	0.021	0.000	0.292	0.000	0.342	0.000
	-0.003	0.000	-2.599	0.000	-0.043	0.000
115	0.021	0.000	0.313	0.000	0.318	0.000
	-0.003	0.000	-2.760	0.000	-0.041	0.000
116	0.021	0.000	0.332	0.000	0.293	0.000
	-0.003	0.000	-2.907	0.000	-0.039	0.000
117	0.021	0.000	0.351	0.000	0.267	0.000
	-0.003	0.000	-3.041	0.000	-0.037	0.000
118	0.021	0.000	0.369	0.000	0.255	0.000
	-0.003	0.000	-3.160	0.000	-0.036	0.000
119	0.021	0.000	0.386	0.000	0.248	0.000
	-0.003	0.000	-3.264	0.000	-0.034	0.000
120	0.021	0.000	0.402	0.000	0.241	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
120	-0.003	0.000	-3.352	0.000	-0.034	0.000
121	0.021	0.000	0.417	0.000	0.234	0.000
	-0.003	0.000	-3.424	0.000	-0.039	0.000
122	0.021	0.000	0.432	0.000	0.227	0.000
	-0.003	0.000	-3.479	0.000	-0.045	0.000
123	0.021	0.000	0.457	0.000	0.212	0.000
	-0.003	0.000	-3.543	0.000	-0.057	0.000
124	0.021	0.000	0.468	0.000	0.204	0.000
	-0.003	0.000	-3.554	0.000	-0.063	0.000
125	0.021	0.000	0.479	0.000	0.195	0.000
	-0.003	0.000	-3.552	0.000	-0.069	0.000
126	0.021	0.000	0.488	0.000	0.185	0.000
	-0.003	0.000	-3.538	0.000	-0.076	0.000
127	0.021	0.000	0.496	0.000	0.175	0.000
	-0.003	0.000	-3.512	0.000	-0.083	0.000
128	0.021	0.000	0.503	0.000	0.164	0.000
	-0.003	0.000	-3.476	0.000	-0.089	0.000
129	0.021	0.000	0.510	0.000	0.153	0.000
	-0.003	0.000	-3.485	0.000	-0.103	0.000
130	0.021	0.000	0.515	0.000	0.142	0.000
	-0.003	0.000	-3.543	0.000	-0.120	0.000
131	0.021	0.000	0.520	0.000	0.131	0.000
	-0.003	0.000	-3.595	0.000	-0.135	0.000
132	0.021	0.000	0.524	0.000	0.123	0.000
	-0.003	0.000	-3.640	0.000	-0.148	0.000
133	0.021	0.000	0.527	0.000	0.123	0.000
	-0.003	0.000	-3.678	0.000	-0.160	0.000
134	0.021	0.000	0.529	0.000	0.123	0.000
	-0.003	0.000	-3.709	0.000	-0.169	0.000
135	0.021	0.000	0.530	0.000	0.123	0.000
	-0.003	0.000	-3.732	0.000	-0.176	0.000
136	0.021	0.000	0.531	0.000	0.123	0.000
	-0.003	0.000	-3.747	0.000	-0.181	0.000
137	0.021	0.000	0.532	0.000	0.122	0.000
	-0.003	0.000	-3.755	0.000	-0.186	0.000
138	0.021	0.000	0.531	0.000	0.120	0.000
	-0.003	0.000	-3.747	0.000	-0.187	0.000
139	0.021	0.000	0.530	0.000	0.117	0.000
	-0.003	0.000	-3.729	0.000	-0.188	0.000
140	0.021	0.000	0.529	0.000	0.112	0.000
	-0.003	0.000	-3.701	0.000	-0.188	0.000
141	0.020	0.000	0.527	0.000	0.107	0.000
	-0.003	0.000	-3.664	0.000	-0.187	0.000
142	0.020	0.000	0.524	0.000	0.101	0.000
	-0.003	0.000	-3.618	0.000	-0.186	0.000
143	0.020	0.000	0.522	0.000	0.094	0.000
	-0.003	0.000	-3.563	0.000	-0.186	0.000
144	0.020	0.000	0.518	0.000	0.086	0.000
	-0.003	0.000	-3.500	0.000	-0.191	0.000
145	0.020	0.000	0.514	0.000	0.077	0.000
	-0.003	0.000	-3.431	0.000	-0.196	0.000
146	0.020	0.000	0.510	0.000	0.071	0.000
	-0.003	0.000	-3.354	0.000	-0.199	0.000
147	0.020	0.000	0.506	0.000	0.072	0.000
	-0.003	0.000	-3.272	0.000	-0.202	0.000
148	0.020	0.000	0.501	0.000	0.075	0.000
	-0.003	0.000	-3.186	0.000	-0.204	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
149	0.019	0.000	0.496	0.000	0.077	0.000
	-0.003	0.000	-3.095	0.000	-0.204	0.000
150	0.019	0.000	0.490	0.000	0.080	0.000
	-0.003	0.000	-3.002	0.000	-0.204	0.000
151	0.019	0.000	0.480	0.000	0.085	0.000
	-0.003	0.000	-2.813	0.000	-0.200	0.000
152	0.019	0.000	0.474	0.000	0.086	0.000
	-0.003	0.000	-2.717	0.000	-0.198	0.000
153	0.019	0.000	0.468	0.000	0.087	0.000
	-0.003	0.000	-2.621	0.000	-0.197	0.000
154	0.019	0.000	0.462	0.000	0.088	0.000
	-0.003	0.000	-2.563	0.000	-0.196	0.000
155	0.018	0.000	0.456	0.000	0.088	0.000
	-0.003	0.000	-2.561	0.000	-0.195	0.000
156	0.018	0.000	0.450	0.000	0.087	0.000
	-0.003	0.000	-2.553	0.000	-0.194	0.000
157	0.018	0.000	0.443	0.000	0.086	0.000
	-0.003	0.000	-2.537	0.000	-0.193	0.000
158	0.018	0.000	0.436	0.000	0.085	0.000
	-0.003	0.000	-2.514	0.000	-0.191	0.000
159	0.018	0.000	0.429	0.000	0.083	0.000
	-0.003	0.000	-2.482	0.000	-0.189	0.000
160	0.017	0.000	0.421	0.000	0.081	0.000
	-0.003	0.000	-2.442	0.000	-0.185	0.000
161	0.017	0.000	0.413	0.000	0.079	0.000
	-0.002	0.000	-2.394	0.000	-0.182	0.000
162	0.017	0.000	0.404	0.000	0.076	0.000
	-0.002	0.000	-2.339	0.000	-0.177	0.000
163	0.017	0.000	0.395	0.000	0.074	0.000
	-0.002	0.000	-2.278	0.000	-0.172	0.000
164	0.017	0.000	0.386	0.000	0.071	0.000
	-0.002	0.000	-2.212	0.000	-0.170	0.000
165	0.016	0.000	0.367	0.000	0.066	0.000
	-0.002	0.000	-2.072	0.000	-0.170	0.000
166	0.016	0.000	0.356	0.000	0.063	0.000
	-0.002	0.000	-1.999	0.000	-0.170	0.000
167	0.016	0.000	0.345	0.000	0.065	0.000
	-0.002	0.000	-1.923	0.000	-0.169	0.000
168	0.016	0.000	0.334	0.000	0.068	0.000
	-0.002	0.000	-1.846	0.000	-0.169	0.000
169	0.016	0.000	0.321	0.000	0.071	0.000
	-0.002	0.000	-1.767	0.000	-0.169	0.000
170	0.015	0.000	0.307	0.000	0.074	0.000
	-0.002	0.000	-1.687	0.000	-0.169	0.000
171	0.015	0.000	0.292	0.000	0.077	0.000
	-0.002	0.000	-1.606	0.000	-0.169	0.000
172	0.015	0.000	0.276	0.000	0.080	0.000
	-0.002	0.000	-1.525	0.000	-0.169	0.000
173	0.015	0.000	0.259	0.000	0.083	0.000
	-0.002	0.000	-1.444	0.000	-0.168	0.000
174	0.015	0.000	0.240	0.000	0.086	0.000
	-0.002	0.000	-1.399	0.000	-0.167	0.000
175	0.014	0.000	0.219	0.000	0.089	0.000
	-0.002	0.000	-1.391	0.000	-0.164	0.000
176	0.014	0.000	0.197	0.000	0.092	0.000
	-0.002	0.000	-1.377	0.000	-0.161	0.000
177	0.014	0.000	0.173	0.000	0.095	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
177	-0.002	0.000	-1.359	0.000	-0.157	0.000
178	0.014	0.000	0.152	0.000	0.099	0.000
	-0.002	0.000	-1.338	0.000	-0.152	0.000
179	0.013	0.000	0.137	0.000	0.105	0.000
	-0.002	0.000	-1.292	0.000	-0.140	0.000
180	0.013	0.000	0.130	0.000	0.107	0.000
	-0.002	0.000	-1.268	0.000	-0.133	0.000
181	0.013	0.000	0.123	0.000	0.107	0.000
	-0.002	0.000	-1.247	0.000	-0.127	0.000
182	0.013	0.000	0.115	0.000	0.107	0.000
	-0.002	0.000	-1.229	0.000	-0.122	0.000
183	0.013	0.000	0.108	0.000	0.107	0.000
	-0.002	0.000	-1.212	0.000	-0.116	0.000
184	0.012	0.000	0.100	0.000	0.110	0.000
	-0.002	0.000	-1.195	0.000	-0.114	0.000
185	0.012	0.000	0.093	0.000	0.116	0.000
	-0.002	0.000	-1.177	0.000	-0.114	0.000
186	0.012	0.000	0.086	0.000	0.122	0.000
	-0.002	0.000	-1.158	0.000	-0.115	0.000
187	0.012	0.000	0.078	0.000	0.128	0.000
	-0.002	0.000	-1.138	0.000	-0.115	0.000
188	0.012	0.000	0.070	0.000	0.135	0.000
	-0.002	0.000	-1.118	0.000	-0.114	0.000
189	0.011	0.000	0.063	0.000	0.142	0.000
	-0.002	0.000	-1.100	0.000	-0.114	0.000
190	0.011	0.000	0.055	0.000	0.149	0.000
	-0.002	0.000	-1.086	0.000	-0.112	0.000
191	0.011	0.000	0.047	0.000	0.156	0.000
	-0.002	0.000	-1.121	0.000	-0.110	0.000
192	0.011	0.000	0.040	0.000	0.163	0.000
	-0.002	0.000	-1.181	0.000	-0.108	0.000
193	0.010	0.000	0.025	0.000	0.177	0.000
	-0.001	0.000	-1.310	0.000	-0.101	0.000
194	0.010	0.000	0.018	0.000	0.181	0.000
	-0.001	0.000	-1.376	0.000	-0.098	0.000
195	0.010	0.000	0.011	0.000	0.183	0.000
	-0.001	0.000	-1.443	0.000	-0.095	0.000
196	0.010	0.000	0.005	0.000	0.183	0.000
	-0.001	0.000	-1.507	0.000	-0.092	0.000
197	0.010	0.000	0.000	0.000	0.181	0.000
	-0.001	0.000	-1.569	0.000	-0.089	0.000
198	0.009	0.000	0.000	0.000	0.176	0.000
	-0.001	0.000	-1.627	0.000	-0.086	0.000
199	0.009	0.000	0.003	0.000	0.171	0.000
	-0.001	0.000	-1.680	0.000	-0.083	0.000
200	0.009	0.000	0.026	0.000	0.163	0.000
	-0.001	0.000	-1.727	0.000	-0.081	0.000
201	0.009	0.000	0.047	0.000	0.155	0.000
	-0.001	0.000	-1.767	0.000	-0.078	0.000
202	0.009	0.000	0.066	0.000	0.145	0.000
	-0.001	0.000	-1.800	0.000	-0.076	0.000
203	0.008	0.000	0.085	0.000	0.134	0.000
	-0.001	0.000	-1.826	0.000	-0.074	0.000
204	0.008	0.000	0.102	0.000	0.123	0.000
	-0.001	0.000	-1.846	0.000	-0.072	0.000
205	0.008	0.000	0.117	0.000	0.112	0.000
	-0.001	0.000	-1.861	0.000	-0.076	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
206	0.008	0.000	0.131	0.000	0.100	0.000
	-0.001	0.000	-1.872	0.000	-0.083	0.000
207	0.007	0.000	0.156	0.000	0.077	0.000
	-0.001	0.000	-1.878	0.000	-0.101	0.000
208	0.007	0.000	0.165	0.000	0.066	0.000
	-0.001	0.000	-1.871	0.000	-0.111	0.000
209	0.007	0.000	0.174	0.000	0.061	0.000
	-0.001	0.000	-1.855	0.000	-0.121	0.000
210	0.007	0.000	0.181	0.000	0.057	0.000
	-0.001	0.000	-1.831	0.000	-0.131	0.000
211	0.007	0.000	0.187	0.000	0.054	0.000
	-0.001	0.000	-1.798	0.000	-0.141	0.000
212	0.006	0.000	0.192	0.000	0.051	0.000
	-0.001	0.000	-1.758	0.000	-0.149	0.000
213	0.006	0.000	0.195	0.000	0.048	0.000
	-0.001	0.000	-1.710	0.000	-0.157	0.000
214	0.006	0.000	0.198	0.000	0.045	0.000
	-0.001	0.000	-1.655	0.000	-0.163	0.000
215	0.006	0.000	0.199	0.000	0.043	0.000
	-0.001	0.000	-1.595	0.000	-0.168	0.000
216	0.006	0.000	0.198	0.000	0.040	0.000
	-0.001	0.000	-1.530	0.000	-0.172	0.000
217	0.005	0.000	0.197	0.000	0.038	0.000
	-0.001	0.000	-1.461	0.000	-0.175	0.000
218	0.005	0.000	0.195	0.000	0.037	0.000
	-0.001	0.000	-1.390	0.000	-0.176	0.000
219	0.005	0.000	0.192	0.000	0.036	0.000
	-0.001	0.000	-1.317	0.000	-0.176	0.000
220	0.005	0.000	0.187	0.000	0.034	0.000
	-0.001	0.000	-1.244	0.000	-0.174	0.000
221	0.004	0.000	0.175	0.000	0.032	0.000
	-0.001	0.000	-1.098	0.000	-0.164	0.000
222	0.004	0.000	0.168	0.000	0.029	0.000
	-0.001	0.000	-1.027	0.000	-0.159	0.000
223	0.004	0.000	0.160	0.000	0.025	0.000
	-0.001	0.000	-0.957	0.000	-0.154	0.000
224	0.004	0.000	0.151	0.000	0.021	0.000
	-0.001	0.000	-0.890	0.000	-0.149	0.000
225	0.004	0.000	0.142	0.000	0.019	0.000
	-0.001	0.000	-0.846	0.000	-0.145	0.000
226	0.003	0.000	0.133	0.000	0.020	0.000
	-0.001	0.000	-0.808	0.000	-0.141	0.000
227	0.003	0.000	0.124	0.000	0.020	0.000
	-0.001	0.000	-0.766	0.000	-0.136	0.000
228	0.003	0.000	0.115	0.000	0.021	0.000
	-0.001	0.000	-0.721	0.000	-0.132	0.000
229	0.003	0.000	0.105	0.000	0.021	0.000
	-0.001	0.000	-0.671	0.000	-0.128	0.000
230	0.003	0.000	0.095	0.000	0.021	0.000
	-0.001	0.000	-0.617	0.000	-0.124	0.000
231	0.002	0.000	0.084	0.000	0.021	0.000
	-0.000	0.000	-0.560	0.000	-0.123	0.000
232	0.002	0.000	0.074	0.000	0.020	0.000
	-0.000	0.000	-0.501	0.000	-0.125	0.000
233	0.002	0.000	0.063	0.000	0.020	0.000
	-0.000	0.000	-0.439	0.000	-0.126	0.000
234	0.002	0.000	0.053	0.000	0.019	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
234	-0.000	0.000	-0.377	0.000	-0.125	0.000
235	0.002	0.000	0.044	0.000	0.018	0.000
	-0.000	0.000	-0.316	0.000	-0.122	0.000
236	0.001	0.000	0.035	0.000	0.017	0.000
	-0.000	0.000	-0.255	0.000	-0.117	0.000
237	0.001	0.000	0.026	0.000	0.015	0.000
	-0.000	0.000	-0.198	0.000	-0.110	0.000
238	0.001	0.000	0.019	0.000	0.014	0.000
	-0.000	0.000	-0.145	0.000	-0.099	0.000
239	0.001	0.000	0.013	0.000	0.011	0.000
	-0.000	0.000	-0.098	0.000	-0.086	0.000
240	0.001	0.000	0.007	0.000	0.009	0.000
	-0.000	0.000	-0.058	0.000	-0.070	0.000
241	0.000	0.000	0.003	0.000	0.006	0.000
	0.000	0.000	-0.027	0.000	-0.050	0.000
242	0.000	0.000	0.001	0.000	0.003	0.000
	0.000	0.000	-0.007	0.000	-0.027	0.000
243	0.000	0.000	0.000	0.000	0.001	0.000
	-0.000	0.000	-0.001	0.000	-0.002	0.000
244	0.001	0.000	0.000	0.000	0.001	0.000
	-0.002	0.000	-0.001	0.000	-0.004	0.000
245	0.002	0.000	0.000	0.000	0.002	0.000
	-0.004	0.000	-0.002	0.000	-0.006	0.000
246	0.003	0.000	0.000	0.000	0.003	0.000
	-0.008	0.000	-0.002	0.000	-0.007	0.000
247	0.004	0.000	0.000	0.000	0.003	0.000
	-0.012	0.000	-0.003	0.000	-0.009	0.000
248	0.006	0.000	0.000	0.000	0.004	0.000
	-0.017	0.000	-0.003	0.000	-0.011	0.000
249	0.008	0.000	0.000	0.000	0.004	0.000
	-0.023	0.000	-0.004	0.000	-0.013	0.000
250	0.010	0.000	0.000	0.000	0.005	0.000
	-0.029	0.000	-0.004	0.000	-0.014	0.000
251	0.012	0.000	0.000	0.000	0.005	0.000
	-0.037	0.000	-0.005	0.000	-0.016	0.000
252	0.015	0.000	0.000	0.000	0.005	0.000
	-0.045	0.000	-0.005	0.000	-0.017	0.000
253	0.017	0.000	0.000	0.000	0.006	0.000
	-0.054	0.000	-0.006	0.000	-0.019	0.000
254	0.020	0.000	0.000	0.000	0.006	0.000
	-0.064	0.000	-0.006	0.000	-0.020	0.000
255	0.024	0.000	0.000	0.000	0.006	0.000
	-0.074	0.000	-0.007	0.000	-0.022	0.000
256	0.027	0.000	0.000	0.000	0.007	0.000
	-0.085	0.000	-0.007	0.000	-0.023	0.000
257	0.030	0.000	0.000	0.000	0.007	0.000
	-0.097	0.000	-0.008	0.000	-0.024	0.000
258	0.034	0.000	0.001	0.000	0.007	0.000
	-0.110	0.000	-0.008	0.000	-0.026	0.000
259	0.037	0.000	0.001	0.000	0.007	0.000
	-0.123	0.000	-0.009	0.000	-0.027	0.000
260	0.041	0.000	0.001	0.000	0.008	0.000
	-0.136	0.000	-0.009	0.000	-0.028	0.000
261	0.045	0.000	0.001	0.000	0.008	0.000
	-0.151	0.000	-0.010	0.000	-0.029	0.000
262	0.049	0.000	0.001	0.000	0.008	0.000
	-0.166	0.000	-0.011	0.000	-0.030	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
263	0.053	0.000	0.001	0.000	0.008	0.000
	-0.181	0.000	-0.011	0.000	-0.032	0.000
264	0.057	0.000	0.001	0.000	0.008	0.000
	-0.197	0.000	-0.012	0.000	-0.033	0.000
265	0.061	0.000	0.001	0.000	0.008	0.000
	-0.214	0.000	-0.012	0.000	-0.034	0.000
266	0.065	0.000	0.001	0.000	0.008	0.000
	-0.231	0.000	-0.013	0.000	-0.035	0.000
267	0.069	0.000	0.001	0.000	0.008	0.000
	-0.248	0.000	-0.013	0.000	-0.036	0.000
268	0.073	0.000	0.001	0.000	0.008	0.000
	-0.266	0.000	-0.014	0.000	-0.037	0.000
269	0.077	0.000	0.001	0.000	0.008	0.000
	-0.285	0.000	-0.014	0.000	-0.038	0.000
270	0.081	0.000	0.001	0.000	0.008	0.000
	-0.303	0.000	-0.015	0.000	-0.038	0.000
271	0.086	0.000	0.001	0.000	0.008	0.000
	-0.323	0.000	-0.015	0.000	-0.039	0.000
272	0.090	0.000	0.001	0.000	0.008	0.000
	-0.342	0.000	-0.016	0.000	-0.040	0.000
273	0.094	0.000	0.001	0.000	0.008	0.000
	-0.362	0.000	-0.016	0.000	-0.041	0.000
274	0.098	0.000	0.001	0.000	0.008	0.000
	-0.383	0.000	-0.017	0.000	-0.042	0.000
275	0.101	0.000	0.001	0.000	0.008	0.000
	-0.404	0.000	-0.017	0.000	-0.042	0.000
276	0.105	0.000	0.001	0.000	0.008	0.000
	-0.425	0.000	-0.018	0.000	-0.043	0.000
277	0.109	0.000	0.001	0.000	0.008	0.000
	-0.446	0.000	-0.018	0.000	-0.044	0.000
278	0.113	0.000	0.001	0.000	0.008	0.000
	-0.468	0.000	-0.019	0.000	-0.044	0.000
279	0.116	0.000	0.001	0.000	0.009	0.000
	-0.490	0.000	-0.019	0.000	-0.045	0.000
280	0.120	0.000	0.001	0.000	0.009	0.000
	-0.513	0.000	-0.020	0.000	-0.046	0.000
281	0.124	0.000	0.001	0.000	0.009	0.000
	-0.535	0.000	-0.021	0.000	-0.046	0.000
282	0.127	0.000	0.001	0.000	0.009	0.000
	-0.558	0.000	-0.021	0.000	-0.047	0.000
283	0.130	0.000	0.001	0.000	0.009	0.000
	-0.581	0.000	-0.022	0.000	-0.047	0.000
284	0.134	0.000	0.001	0.000	0.010	0.000
	-0.605	0.000	-0.022	0.000	-0.048	0.000
285	0.137	0.000	0.001	0.000	0.010	0.000
	-0.628	0.000	-0.023	0.000	-0.048	0.000
286	0.140	0.000	0.001	0.000	0.010	0.000
	-0.652	0.000	-0.023	0.000	-0.049	0.000
287	0.143	0.000	0.001	0.000	0.010	0.000
	-0.676	0.000	-0.024	0.000	-0.049	0.000
288	0.146	0.000	0.001	0.000	0.010	0.000
	-0.701	0.000	-0.024	0.000	-0.049	0.000
289	0.149	0.000	0.002	0.000	0.010	0.000
	-0.725	0.000	-0.025	0.000	-0.050	0.000
290	0.152	0.000	0.002	0.000	0.011	0.000
	-0.750	0.000	-0.025	0.000	-0.050	0.000
291	0.155	0.000	0.002	0.000	0.011	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal Displacements

Node	u-X [mm]	u-Y [mm]	u-Z [mm]	u-XX [mrad]	u-YY [mrad]	u-ZZ [mrad]
291	-0.774	0.000	-0.026	0.000	-0.050	0.000
292	0.158	0.000	0.002	0.000	0.011	0.000
	-0.799	0.000	-0.026	0.000	-0.050	0.000
293	0.160	0.000	0.002	0.000	0.011	0.000
	-0.824	0.000	-0.027	0.000	-0.051	0.000
294	0.163	0.000	0.002	0.000	0.011	0.000
	-0.849	0.000	-0.027	0.000	-0.051	0.000
295	0.166	0.000	0.002	0.000	0.011	0.000
	-0.875	0.000	-0.028	0.000	-0.051	0.000
296	0.169	0.000	0.002	0.000	0.011	0.000
	-0.900	0.000	-0.028	0.000	-0.051	0.000
297	0.171	0.000	0.002	0.000	0.011	0.000
	-0.925	0.000	-0.029	0.000	-0.051	0.000
298	0.174	0.000	0.002	0.000	0.011	0.000
	-0.951	0.000	-0.030	0.000	-0.052	0.000
299	0.177	0.000	0.002	0.000	0.011	0.000
	-0.976	0.000	-0.030	0.000	-0.052	0.000
300	0.182	0.000	0.002	0.000	0.011	0.000
	-1.002	0.000	-0.031	0.000	-0.052	0.000
301	0.187	0.000	0.002	0.000	0.011	0.000
	-1.027	0.000	-0.031	0.000	-0.052	0.000
302	0.193	0.000	0.002	0.000	0.011	0.000
	-1.053	0.000	-0.032	0.000	-0.052	0.000
303	0.199	0.000	0.002	0.000	0.011	0.000
	-1.079	0.000	-0.032	0.000	-0.052	0.000
501	0.000	0.000	0.083	0.000	0.205	0.000
	0.000	0.000	-4.161	0.000	-0.082	0.000
502	0.000	0.000	0.226	0.000	0.000	0.000
	0.000	0.000	-4.615	0.000	0.000	0.000
MAX	0.204	0.000	0.532	0.000	0.492	0.000
MIN	-1.104	0.000	-4.615	0.000	-0.204	0.000

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
1	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	0.00	0.000	-0.001	0.000
2	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
3	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
4	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
5	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
6	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
7	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
8	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
9	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
10	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
11	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
12	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
13	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
14	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
15	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
101	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
102	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
103	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	0.00	0.000	-0.001	0.000
104	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.001	0.000
105	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.001	0.000
106	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.001	0.000
107	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.001	0.000
108	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.001	0.000
109	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.001	0.000
110	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.001	0.000
111	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
112	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
113	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
114	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
115	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
116	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
117	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
118	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
119	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
120	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
121	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
122	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
123	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
124	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
125	0.00	0.00	0.01	0.000	0.001	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
125	0.00	0.00	-0.01	0.000	-0.000	0.000
126	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
127	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
128	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
129	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
130	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
131	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
132	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
133	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
134	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
135	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
136	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
137	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
138	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
139	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
140	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
141	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
142	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
143	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
144	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
145	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.001	0.000
146	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
147	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
148	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
149	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
150	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
151	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
152	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
153	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
154	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
155	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
156	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
157	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
158	0.00	0.00	0.01	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
159	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
160	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
161	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.01	0.000	-0.000	0.000
162	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
163	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
164	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
165	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
166	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
167	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
168	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
169	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
170	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
171	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
172	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
173	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
174	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
175	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
176	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
177	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
178	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
179	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
180	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
181	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
182	0.00	0.00	0.00	0.000	0.001	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
182	0.00	0.00	-0.00	0.000	-0.000	0.000
183	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
184	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
185	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
186	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
187	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
188	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
189	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
190	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
191	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
192	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
193	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
194	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
195	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
196	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
197	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
198	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
199	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
200	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
201	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
202	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
203	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
204	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
205	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
206	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
207	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
208	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
209	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
210	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
211	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
212	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
213	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
214	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
215	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
216	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
217	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
218	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
219	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
220	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
221	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
222	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
223	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
224	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
225	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	-0.00	0.000	-0.000	0.000
226	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
227	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
228	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
229	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
230	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
231	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
232	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
233	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
234	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
235	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
236	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
237	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
238	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
239	0.00	0.00	0.00	0.000	0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
239	0.00	0.00	0.00	0.000	-0.000	0.000
240	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
241	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
242	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
243	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
244	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
245	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
246	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
247	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
248	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
249	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
250	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
251	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
252	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
253	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
254	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
255	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
256	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
257	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
258	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
259	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
260	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
261	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
262	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
263	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
264	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
265	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
266	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
267	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
268	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
269	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
270	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
271	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
272	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
273	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
274	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
275	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
276	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
277	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
278	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
279	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
280	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
281	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
282	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
283	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
284	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
285	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
286	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
287	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
288	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
289	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
290	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
291	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
292	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
293	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
294	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
295	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
296	0.00	0.00	0.00	0.000	0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal velocities

Node	v-X [m/sec]	v-Y [m/sec]	v-Z [m/sec]	v-XX [rad/sec]	v-YY [rad/sec]	v-ZZ [rad/sec]
296	-0.00	0.00	0.00	0.000	-0.000	0.000
297	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
298	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
299	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
300	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
301	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
302	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
303	0.00	0.00	0.00	0.000	0.000	0.000
	-0.00	0.00	0.00	0.000	-0.000	0.000
501	0.00	0.00	0.04	0.000	0.001	0.000
	0.00	0.00	-0.04	0.000	-0.001	0.000
502	0.00	0.00	0.01	0.000	0.000	0.000
	0.00	0.00	-0.02	0.000	0.000	0.000
MAX	0.00	0.00	0.04	0.000	0.001	0.000
MIN	-0.00	0.00	-0.04	0.000	-0.001	0.000

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
1	0.00	0.00	0.00	0.000	0.030	0.000
	0.00	0.00	0.00	0.000	-0.006	0.000
2	0.00	0.00	0.04	0.000	0.005	0.000
	0.00	0.00	-0.06	0.000	-0.009	0.000
3	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.05	0.000	-0.008	0.000
4	0.00	0.00	0.04	0.000	0.004	0.000
	0.00	0.00	-0.04	0.000	-0.010	0.000
5	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
6	0.00	0.00	0.03	0.000	0.009	0.000
	0.00	0.00	-0.03	0.000	-0.005	0.000
7	0.00	0.00	0.02	0.000	0.005	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
8	0.00	0.00	0.01	0.000	0.008	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
9	0.00	0.00	0.01	0.000	0.009	0.000
	0.00	0.00	-0.02	0.000	-0.007	0.000
10	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
11	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
12	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
13	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
14	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
15	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000
101	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
102	0.02	0.00	0.00	0.000	0.002	0.000
	-0.01	0.00	0.00	0.000	-0.002	0.000
103	0.00	0.00	0.00	0.000	0.024	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
104	0.00	0.00	0.01	0.000	0.020	0.000
	0.00	0.00	-0.02	0.000	-0.006	0.000
105	0.00	0.00	0.01	0.000	0.015	0.000
	0.00	0.00	-0.03	0.000	-0.006	0.000
106	0.00	0.00	0.01	0.000	0.016	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
107	0.00	0.00	0.01	0.000	0.013	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
108	0.00	0.00	0.02	0.000	0.011	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
109	0.00	0.00	0.02	0.000	0.010	0.000
	0.00	0.00	-0.05	0.000	-0.011	0.000
110	0.00	0.00	0.02	0.000	0.009	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
111	0.00	0.00	0.02	0.000	0.008	0.000
	0.00	0.00	-0.05	0.000	-0.010	0.000
112	0.00	0.00	0.03	0.000	0.008	0.000
	0.00	0.00	-0.05	0.000	-0.010	0.000
113	0.00	0.00	0.03	0.000	0.007	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
114	0.00	0.00	0.03	0.000	0.007	0.000
	0.00	0.00	-0.05	0.000	-0.011	0.000
115	0.00	0.00	0.03	0.000	0.006	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
116	0.00	0.00	0.03	0.000	0.009	0.000
	0.00	0.00	-0.06	0.000	-0.010	0.000
117	0.00	0.00	0.04	0.000	0.006	0.000
	0.00	0.00	-0.06	0.000	-0.013	0.000
118	0.00	0.00	0.04	0.000	0.005	0.000
	0.00	0.00	-0.06	0.000	-0.010	0.000
119	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.06	0.000	-0.010	0.000
120	0.00	0.00	0.04	0.000	0.005	0.000
	0.00	0.00	-0.06	0.000	-0.010	0.000
121	0.00	0.00	0.05	0.000	0.006	0.000
	0.00	0.00	-0.06	0.000	-0.010	0.000
122	0.00	0.00	0.05	0.000	0.007	0.000
	0.00	0.00	-0.06	0.000	-0.010	0.000
123	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.06	0.000	-0.009	0.000
124	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.06	0.000	-0.009	0.000
125	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
126	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
127	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.05	0.000	-0.011	0.000
128	0.00	0.00	0.04	0.000	0.005	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
129	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
130	0.00	0.00	0.04	0.000	0.006	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
130	0.00	0.00	-0.05	0.000	-0.009	0.000
131	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
132	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.05	0.000	-0.008	0.000
133	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.05	0.000	-0.008	0.000
134	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.05	0.000	-0.008	0.000
135	0.00	0.00	0.04	0.000	0.012	0.000
	0.00	0.00	-0.05	0.000	-0.008	0.000
136	0.00	0.00	0.04	0.000	0.012	0.000
	0.00	0.00	-0.05	0.000	-0.008	0.000
137	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.05	0.000	-0.008	0.000
138	0.00	0.00	0.04	0.000	0.006	0.000
	0.00	0.00	-0.05	0.000	-0.010	0.000
139	0.00	0.00	0.05	0.000	0.005	0.000
	0.00	0.00	-0.05	0.000	-0.009	0.000
140	0.00	0.00	0.04	0.000	0.006	0.000
	0.00	0.00	-0.04	0.000	-0.009	0.000
141	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
142	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
143	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
144	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
145	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
146	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.04	0.000	-0.009	0.000
147	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
148	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
149	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.04	0.000	-0.009	0.000
150	0.00	0.00	0.04	0.000	0.005	0.000
	0.00	0.00	-0.04	0.000	-0.010	0.000
151	0.00	0.00	0.04	0.000	0.004	0.000
	0.00	0.00	-0.04	0.000	-0.010	0.000
152	0.00	0.00	0.04	0.000	0.006	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
153	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.04	0.000	-0.005	0.000
154	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.04	0.000	-0.005	0.000
155	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.006	0.000
156	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.04	0.000	-0.006	0.000
157	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
158	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
159	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.04	0.000	-0.006	0.000
160	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.04	0.000	-0.005	0.000
161	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.04	0.000	-0.005	0.000
162	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.006	0.000
163	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
164	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.009	0.000
165	0.00	0.00	0.04	0.000	0.010	0.000
	0.00	0.00	-0.04	0.000	-0.007	0.000
166	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
167	0.00	0.00	0.04	0.000	0.006	0.000
	0.00	0.00	-0.04	0.000	-0.008	0.000
168	0.00	0.00	0.04	0.000	0.004	0.000
	0.00	0.00	-0.04	0.000	-0.009	0.000
169	0.00	0.00	0.04	0.000	0.004	0.000
	0.00	0.00	-0.04	0.000	-0.010	0.000
170	0.00	0.00	0.04	0.000	0.007	0.000
	0.00	0.00	-0.03	0.000	-0.008	0.000
171	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.03	0.000	-0.008	0.000
172	0.00	0.00	0.04	0.000	0.008	0.000
	0.00	0.00	-0.03	0.000	-0.006	0.000
173	0.00	0.00	0.04	0.000	0.009	0.000
	0.00	0.00	-0.03	0.000	-0.006	0.000
174	0.00	0.00	0.04	0.000	0.006	0.000
	0.00	0.00	-0.03	0.000	-0.008	0.000
175	0.00	0.00	0.03	0.000	0.005	0.000
	0.00	0.00	-0.03	0.000	-0.008	0.000
176	0.00	0.00	0.03	0.000	0.007	0.000
	0.00	0.00	-0.03	0.000	-0.009	0.000
177	0.00	0.00	0.03	0.000	0.008	0.000
	0.00	0.00	-0.03	0.000	-0.007	0.000
178	0.00	0.00	0.03	0.000	0.010	0.000
	0.00	0.00	-0.03	0.000	-0.005	0.000
179	0.00	0.00	0.03	0.000	0.008	0.000
	0.00	0.00	-0.03	0.000	-0.006	0.000
180	0.00	0.00	0.03	0.000	0.006	0.000
	0.00	0.00	-0.03	0.000	-0.007	0.000
181	0.00	0.00	0.03	0.000	0.007	0.000
	0.00	0.00	-0.02	0.000	-0.007	0.000
182	0.00	0.00	0.03	0.000	0.009	0.000
	0.00	0.00	-0.02	0.000	-0.008	0.000
183	0.00	0.00	0.03	0.000	0.009	0.000
	0.00	0.00	-0.02	0.000	-0.006	0.000
184	0.00	0.00	0.03	0.000	0.011	0.000
	0.00	0.00	-0.02	0.000	-0.005	0.000
185	0.00	0.00	0.03	0.000	0.009	0.000
	0.00	0.00	-0.02	0.000	-0.007	0.000
186	0.00	0.00	0.03	0.000	0.007	0.000
	0.00	0.00	-0.02	0.000	-0.008	0.000
187	0.00	0.00	0.03	0.000	0.006	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
187	0.00	0.00	-0.02	0.000	-0.009	0.000
188	0.00	0.00	0.02	0.000	0.007	0.000
	0.00	0.00	-0.02	0.000	-0.010	0.000
189	0.00	0.00	0.02	0.000	0.008	0.000
	0.00	0.00	-0.02	0.000	-0.009	0.000
190	0.00	0.00	0.02	0.000	0.008	0.000
	0.00	0.00	-0.02	0.000	-0.006	0.000
191	0.00	0.00	0.02	0.000	0.008	0.000
	0.00	0.00	-0.02	0.000	-0.007	0.000
192	0.00	0.00	0.02	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
193	0.00	0.00	0.02	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
194	0.00	0.00	0.02	0.000	0.008	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
195	0.00	0.00	0.01	0.000	0.010	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
196	0.00	0.00	0.01	0.000	0.010	0.000
	0.00	0.00	-0.01	0.000	-0.005	0.000
197	0.00	0.00	0.02	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
198	0.00	0.00	0.02	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
199	0.00	0.00	0.02	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
200	0.00	0.00	0.02	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
201	0.00	0.00	0.02	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
202	0.00	0.00	0.02	0.000	0.010	0.000
	0.00	0.00	-0.01	0.000	-0.005	0.000
203	0.00	0.00	0.02	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
204	0.00	0.00	0.02	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
205	0.00	0.00	0.01	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
206	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
207	0.00	0.00	0.02	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
208	0.00	0.00	0.02	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
209	0.00	0.00	0.02	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
210	0.00	0.00	0.02	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
211	0.00	0.00	0.02	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
212	0.00	0.00	0.02	0.000	0.008	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
213	0.00	0.00	0.02	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
214	0.00	0.00	0.02	0.000	0.010	0.000
	0.00	0.00	-0.01	0.000	-0.005	0.000
215	0.00	0.00	0.02	0.000	0.008	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
216	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.02	0.000	-0.007	0.000
217	0.00	0.00	0.01	0.000	0.005	0.000
	0.00	0.00	-0.02	0.000	-0.008	0.000
218	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.02	0.000	-0.009	0.000
219	0.00	0.00	0.01	0.000	0.008	0.000
	0.00	0.00	-0.02	0.000	-0.008	0.000
220	0.00	0.00	0.01	0.000	0.009	0.000
	0.00	0.00	-0.02	0.000	-0.006	0.000
221	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.02	0.000	-0.008	0.000
222	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.02	0.000	-0.009	0.000
223	0.00	0.00	0.01	0.000	0.006	0.000
	0.00	0.00	-0.02	0.000	-0.006	0.000
224	0.00	0.00	0.01	0.000	0.008	0.000
	0.00	0.00	-0.02	0.000	-0.010	0.000
225	0.00	0.00	0.01	0.000	0.005	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
226	0.00	0.00	0.01	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.010	0.000
227	0.00	0.00	0.01	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
228	0.00	0.00	0.01	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.010	0.000
229	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
230	0.00	0.00	0.01	0.000	0.010	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
231	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.006	0.000
232	0.00	0.00	0.01	0.000	0.009	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
233	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
234	0.00	0.00	0.01	0.000	0.008	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
235	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
236	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
237	0.00	0.00	0.01	0.000	0.008	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
238	0.00	0.00	0.01	0.000	0.006	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
239	0.00	0.00	0.01	0.000	0.007	0.000
	0.00	0.00	-0.01	0.000	-0.009	0.000
240	0.00	0.00	0.01	0.000	0.005	0.000
	0.00	0.00	-0.01	0.000	-0.008	0.000
241	0.00	0.00	0.00	0.000	0.010	0.000
	0.00	0.00	-0.01	0.000	-0.012	0.000
242	0.00	0.00	0.01	0.000	0.004	0.000
	0.00	0.00	-0.01	0.000	-0.007	0.000
243	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
244	0.00	0.00	0.00	0.000	0.000	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
244	0.00	0.00	0.00	0.000	-0.000	0.000
245	0.00	0.00	0.00	0.000	0.000	0.000
	0.00	0.00	0.00	0.000	-0.000	0.000
246	0.00	0.00	0.00	0.000	0.001	0.000
	0.00	0.00	0.00	0.000	-0.001	0.000
247	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
248	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
249	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
250	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
251	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
252	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
253	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
254	0.00	0.00	0.00	0.000	0.001	0.000
	-0.00	0.00	0.00	0.000	-0.001	0.000
255	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
256	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
257	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
258	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
259	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
260	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
261	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
262	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
263	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
264	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
265	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
266	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
267	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
268	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
269	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
270	0.01	0.00	0.00	0.000	0.001	0.000
	-0.01	0.00	0.00	0.000	-0.001	0.000
271	0.01	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
272	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
273	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
274	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
275	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
276	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
277	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
278	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
279	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
280	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
281	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
282	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
283	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
284	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
285	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
286	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
287	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
288	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
289	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
290	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
291	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
292	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
293	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
294	0.02	0.00	0.00	0.000	0.001	0.000
	-0.02	0.00	0.00	0.000	-0.001	0.000
295	0.02	0.00	0.00	0.000	0.002	0.000
	-0.02	0.00	0.00	0.000	-0.002	0.000
296	0.02	0.00	0.00	0.000	0.002	0.000
	-0.02	0.00	0.00	0.000	-0.002	0.000
297	0.02	0.00	0.00	0.000	0.002	0.000
	-0.02	0.00	0.00	0.000	-0.002	0.000
298	0.02	0.00	0.00	0.000	0.002	0.000
	-0.02	0.00	0.00	0.000	-0.002	0.000
299	0.02	0.00	0.00	0.000	0.002	0.000
	-0.01	0.00	0.00	0.000	-0.002	0.000
300	0.02	0.00	0.00	0.000	0.002	0.000
	-0.01	0.00	0.00	0.000	-0.002	0.000
301	0.02	0.00	0.00	0.000	0.002	0.000

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Nodal accelerations

Node	a-X [m/sec ²]	a-Y [m/sec ²]	a-Z [m/sec ²]	a-XX [rad/sec ²]	a-YY [rad/sec ²]	a-ZZ [rad/sec ²]
301	-0.01	0.00	0.00	0.000	-0.002	0.000
302	0.02	0.00	0.00	0.000	0.002	0.000
	-0.01	0.00	0.00	0.000	-0.002	0.000
303	0.02	0.00	0.00	0.000	0.002	0.000
	-0.01	0.00	0.00	0.000	-0.002	0.000
501	0.00	0.00	16168.37	0.000	16891.965	0.000
	0.00	0.00	-15997.02	0.000	-16895.91	-0.000
502	0.00	0.00	0.13	0.000	0.000	0.000
	0.00	0.00	-0.17	0.000	0.000	0.000
MAX	0.02	0.00	16168.37	0.000	16891.965	0.000
MIN	-0.02	0.00	-15997.02	0.000	-16895.91	-0.000

Time history for Nodal Displacements

Node 501 (E 1263) u-Z MINIMUM = -4.161 MAXIMUM = 0.083 [mm]
Node 502 (E 1268) u-Z MINIMUM = -4.615 MAXIMUM = 0.226 [mm]

stored in database for DYNR with identification no 3000

Time history for Nodal accelerations

Node 2 (E 6) a-Z MINIMUM = -0.06 MAXIMUM = 0.04 [m/sec²]
Node 3 (E 12) a-Z MINIMUM = -0.05 MAXIMUM = 0.04 [m/sec²]
Node 4 (E 18) a-Z MINIMUM = -0.04 MAXIMUM = 0.04 [m/sec²]
Node 5 (E 24) a-Z MINIMUM = -0.04 MAXIMUM = 0.04 [m/sec²]
Node 6 (E 30) a-Z MINIMUM = -0.03 MAXIMUM = 0.03 [m/sec²]
Node 7 (E 36) a-Z MINIMUM = -0.01 MAXIMUM = 0.02 [m/sec²]
Node 8 (E 42) a-Z MINIMUM = -0.01 MAXIMUM = 0.01 [m/sec²]
Node 9 (E 48) a-Z MINIMUM = -0.02 MAXIMUM = 0.01 [m/sec²]

stored in database for DYNR with identification no 3000

Time history for Nodal Displacements

Node 2 (E 6) u-Z MINIMUM = -3.518 MAXIMUM = 0.445 [mm]
Node 3 (E 12) u-Z MINIMUM = -3.755 MAXIMUM = 0.532 [mm]
Node 4 (E 18) u-Z MINIMUM = -2.908 MAXIMUM = 0.485 [mm]
Node 5 (E 24) u-Z MINIMUM = -2.143 MAXIMUM = 0.377 [mm]
Node 6 (E 30) u-Z MINIMUM = -1.315 MAXIMUM = 0.145 [mm]
Node 7 (E 36) u-Z MINIMUM = -1.244 MAXIMUM = 0.032 [mm]
Node 8 (E 42) u-Z MINIMUM = -1.878 MAXIMUM = 0.144 [mm]
Node 9 (E 48) u-Z MINIMUM = -1.171 MAXIMUM = 0.182 [mm]

stored in database for DYNR with identification no 3000

Time history for Nodal Displacements

Node 501 (E 1263) u-Z MINIMUM = -4.161 MAXIMUM = 0.083 [mm]
Node 502 (E 1268) u-Z MINIMUM = -4.615 MAXIMUM = 0.226 [mm]

stored in database for DYNR with identification no 3001

Time history for Nodal accelerations

Node 2 (E 6) a-Z MINIMUM = -0.06 MAXIMUM = 0.04 [m/sec²]
Node 3 (E 12) a-Z MINIMUM = -0.05 MAXIMUM = 0.04 [m/sec²]
Node 4 (E 18) a-Z MINIMUM = -0.04 MAXIMUM = 0.04 [m/sec²]
Node 5 (E 24) a-Z MINIMUM = -0.04 MAXIMUM = 0.04 [m/sec²]
Node 6 (E 30) a-Z MINIMUM = -0.03 MAXIMUM = 0.03 [m/sec²]
Node 7 (E 36) a-Z MINIMUM = -0.01 MAXIMUM = 0.02 [m/sec²]
Node 8 (E 42) a-Z MINIMUM = -0.01 MAXIMUM = 0.01 [m/sec²]
Node 9 (E 48) a-Z MINIMUM = -0.02 MAXIMUM = 0.01 [m/sec²]

stored in database for DYNR with identification no 3001

DEVELOPMENT OF STRUCTURE

Kjøretøyanalyse med sporuregelmessigheter

Time history for Nodal Displacements

Node	2 (E 6)	u-Z	MINIMUM =	-3.518	MAXIMUM =	0.445	[mm]
Node	3 (E 12)	u-Z	MINIMUM =	-3.755	MAXIMUM =	0.532	[mm]
Node	4 (E 18)	u-Z	MINIMUM =	-2.908	MAXIMUM =	0.485	[mm]
Node	5 (E 24)	u-Z	MINIMUM =	-2.143	MAXIMUM =	0.377	[mm]
Node	6 (E 30)	u-Z	MINIMUM =	-1.315	MAXIMUM =	0.145	[mm]
Node	7 (E 36)	u-Z	MINIMUM =	-1.244	MAXIMUM =	0.032	[mm]
Node	8 (E 42)	u-Z	MINIMUM =	-1.878	MAXIMUM =	0.144	[mm]
Node	9 (E 48)	u-Z	MINIMUM =	-1.171	MAXIMUM =	0.182	[mm]

stored in database for DYNR with identification no 3001

Time history for Nodal Displacements

Node	501 (E 1263)	u-Z	MINIMUM =	-4.161	MAXIMUM =	0.083	[mm]
Node	502 (E 1268)	u-Z	MINIMUM =	-4.615	MAXIMUM =	0.226	[mm]

stored in database for DYNR with identification no 3002

Time history for Nodal accelerations

Node	2 (E 6)	a-Z	MINIMUM =	-0.06	MAXIMUM =	0.04	[m/sec ²]
Node	3 (E 12)	a-Z	MINIMUM =	-0.05	MAXIMUM =	0.04	[m/sec ²]
Node	4 (E 18)	a-Z	MINIMUM =	-0.04	MAXIMUM =	0.04	[m/sec ²]
Node	5 (E 24)	a-Z	MINIMUM =	-0.04	MAXIMUM =	0.04	[m/sec ²]
Node	6 (E 30)	a-Z	MINIMUM =	-0.03	MAXIMUM =	0.03	[m/sec ²]
Node	7 (E 36)	a-Z	MINIMUM =	-0.01	MAXIMUM =	0.02	[m/sec ²]
Node	8 (E 42)	a-Z	MINIMUM =	-0.01	MAXIMUM =	0.01	[m/sec ²]
Node	9 (E 48)	a-Z	MINIMUM =	-0.02	MAXIMUM =	0.01	[m/sec ²]

stored in database for DYNR with identification no 3002

Time history for Nodal Displacements

Node	2 (E 6)	u-Z	MINIMUM =	-3.518	MAXIMUM =	0.445	[mm]
Node	3 (E 12)	u-Z	MINIMUM =	-3.755	MAXIMUM =	0.532	[mm]
Node	4 (E 18)	u-Z	MINIMUM =	-2.908	MAXIMUM =	0.485	[mm]
Node	5 (E 24)	u-Z	MINIMUM =	-2.143	MAXIMUM =	0.377	[mm]
Node	6 (E 30)	u-Z	MINIMUM =	-1.315	MAXIMUM =	0.145	[mm]
Node	7 (E 36)	u-Z	MINIMUM =	-1.244	MAXIMUM =	0.032	[mm]
Node	8 (E 42)	u-Z	MINIMUM =	-1.878	MAXIMUM =	0.144	[mm]
Node	9 (E 48)	u-Z	MINIMUM =	-1.171	MAXIMUM =	0.182	[mm]

stored in database for DYNR with identification no 3002