

REBIS
AutoPIPE 6.20 RESULT PAGE 1

[illegible]

REBIS Industrial Workgroup Software
1600 Riviera Ave., Suite 300
Walnut Creek, CA 94596

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 2

**
**
** AUTOPIPE SYSTEM INFORMATION **
**

SYSTEM NAME : 79319818_KOMPLETT

PROJECT ID : ASU KOSICE

DESCRIPTION :

PREPARED BY : _____
WEGSTEIN

CHECKED BY : _____
FRICKHOEFER

PIPING CODE : B31.3
VERTICAL AXIS : Z
AMBIENT TEMPERATURE : 20.0 deg C
COMPONENT LIBRARY : HANAU_AL
MATERIAL LIBRARY : AUTOB313
MODEL REVISION NUMBER : 12

REBIS
AutoPIPE 6.20 RESULT PAGE 3

Point name	Load combination	TRANSLATIONS (mm)			ROTATIONS (deg)		
		X	Y	Z	X	Y	Z
*** Segment A begin *** Line # 79319818							
A00	T1	-4.700	0.000	-203.200	0.000	0.000	0.000
A01 N	T1	-4.700	0.000	-203.200	0.000	0.000	0.000
A01 F	T1	-7.776	-2.945	-201.586	0.609	-0.042	-0.131
A02 N	T1	-6.005	-14.282	-194.744	0.617	0.080	-0.071
A02 F	T1	-1.333	-16.451	-192.025	0.145	0.033	-0.079
A03	T1	-1.321	-16.447	-192.022	0.144	0.033	-0.078
A04	T1	0.591	-15.833	-191.669	0.088	0.013	-0.059
A05	T1	3.322	-15.236	-191.647	0.029	-0.044	-0.033
A06	T1	6.052	-15.018	-192.711	0.082	-0.095	-0.008
A07	T1	7.974	-15.059	-193.760	0.133	-0.112	0.011
A08 N	T1	7.974	-15.059	-193.760	0.133	-0.112	0.011
A08 F	T1	11.844	-12.324	-196.382	0.530	-0.053	-0.043
A09 N	T1	11.537	-2.111	-201.884	0.523	0.064	0.014
A09 F	T1	7.700	0.000	-203.200	0.000	0.000	0.000
A10	T1	7.700	0.000	-203.200	0.000	0.000	0.000
*** Segment A end *** Line # 79319818							
*** Segment B begin *** Line # 79319818							
A05	T1	3.322	-15.236	-191.647	0.029	-0.044	-0.033
B01	T1	2.912	-15.193	-193.562	-0.029	-0.049	-0.034
B02	T1	1.913	-13.982	-197.638	-0.092	-0.058	-0.036
B03	T1	1.130	-12.385	-200.727	-0.126	-0.053	-0.034
B04 N	T1	0.266	-9.688	-204.488	-0.170	-0.048	-0.031
B04 F	T1	0.000	-4.700	-203.600	0.000	0.000	0.000
B05	T1	0.000	-4.700	-203.600	0.000	0.000	0.000
*** Segment B end *** Line # 79319818							

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 4

D I S P L A C E M E N T S

Point name	Load combination	TRANSLATIONS (mm)			ROTATIONS (deg)		
		X	Y	Z	X	Y	Z
*** Segment C begin *** Line # 79319818							
B02	T1	1.913	-13.982	-197.638	-0.092	-0.058	-0.036
C01	T1	0.551	-14.235	-197.053	-0.099	-0.128	-0.046
*** Segment C end *** Line # 79319818							
*** Segment D begin *** Line # 79319818							
B03	T1	1.130	-12.385	-200.727	-0.126	-0.053	-0.034
D01	T1	-0.174	-12.588	-200.412	-0.126	-0.053	-0.034
*** Segment D end *** Line # 79319818							
*** Segment E begin *** Line # 79319818							
E00	T1	-8.887	-12.956	-179.725	0.051	-1.400	-0.118
E01	T1	-8.425	-12.598	-182.549	-0.339	-1.283	-0.223
*** Segment E end *** Line # 79319818							
*** Segment F begin *** Line # 79319818							
C01	T1	0.551	-14.235	-197.053	-0.099	-0.128	-0.046
F01 N	T1	-3.185	-15.602	-190.668	-0.163	-0.579	-0.108
F01 F	T1	-5.097	-15.199	-186.177	-0.382	-1.059	-0.216
E01	T1	-8.425	-12.598	-182.549	-0.339	-1.283	-0.223
F10	T1	-11.457	-10.445	-179.990	-0.274	-1.455	-0.234
F03 N	T1	-14.550	-8.455	-178.258	-0.169	-1.618	-0.243
F03 F	T1	-17.724	-8.854	-171.613	0.092	-1.792	-0.357
F04 N	T1	-28.246	-19.227	-120.563	0.712	-1.905	-0.316
F04 F	T1	-36.111	-24.061	-114.746	1.094	-1.676	-0.430
F05 N	T1	-57.551	-39.850	-117.635	1.304	-1.585	-0.376
F05 F	T1	-62.010	-46.831	-111.777	1.881	-1.438	-0.377
F11	T1	-60.260	-47.874	-102.740	1.932	-1.393	-0.363
F06 N	T1	-48.156	-56.316	-27.673	1.831	-1.028	-0.277

D I S P L A C E M E N T S

Point name	Load combination	TRANSLATIONS (mm)			ROTATIONS (deg)		
		X	Y	Z	X	Y	Z
F06 F	T1	-43.519	-51.523	-20.387	1.173	-0.832	-0.162
F07 N	T1	2.556	-0.284	-2.891	0.251	-0.366	-0.010
F07 F	T1	2.850	0.261	-1.070	0.106	-0.142	-0.036
F08	T1	0.192	0.002	-0.008	0.007	-0.013	-0.003
F09	T1	0.000	0.000	0.000	0.000	0.000	0.000
*** Segment F end *** Line # 79319818							
*** Segment G begin *** Line # 79319818							
E00	T1	-8.887	-12.956	-179.725	0.051	-1.400	-0.118
G01 N	T1	-9.884	-12.970	-172.990	0.892	-1.546	0.114
G01 F	T1	-10.330	-11.983	-166.441	1.849	-1.779	0.630
G02 N	T1	-22.329	1.608	-92.710	2.856	-2.210	1.025
G02 F	T1	-22.247	5.515	-83.063	2.441	-2.260	0.749
G03 N	T1	-18.043	18.929	-57.101	1.432	-1.930	0.531
G03 F	T1	-15.085	22.084	-53.916	1.007	-1.393	0.331
G04 N	T1	11.704	15.573	-45.248	-1.231	-0.652	-0.668
G04 F	T1	11.983	12.378	-41.828	-1.618	-0.893	-0.759
G05 N	T1	1.713	4.088	-8.028	-1.298	-1.038	-0.661
G05 F	T1	1.006	2.960	-5.103	-0.973	-0.820	-0.460
G06	T1	1.004	2.954	-5.094	-0.972	-0.820	-0.460
G07 N	T1	0.167	0.624	-1.292	-0.442	-0.547	-0.300
G07 F	T1	0.089	0.001	-0.335	-0.001	-0.001	-0.001
G08	T1	0.089	0.001	-0.335	-0.001	-0.001	-0.001
G09	T1	0.000	0.000	0.000	0.000	0.000	0.000
G10	T1	0.465	-0.003	0.122	0.000	-0.002	0.002
G11 N	T1	1.840	-1.158	-0.572	-0.070	-0.349	0.387
G11 F	T1	3.298	-2.215	-0.864	-0.145	-0.682	0.631

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 6

D I S P L A C E M E N T S

Point name	Load combination	TRANSLATIONS (mm)			ROTATIONS (deg)		
		X	Y	Z	X	Y	Z
G12 N	T1	15.049	-1.454	1.633	0.464	-1.490	1.223
G12 F	T1	19.363	-2.492	-2.284	1.149	-2.391	1.269
G13 N	T1	22.633	-19.534	-43.177	3.407	-2.780	0.712
G13 F	T1	23.309	-19.852	-56.898	4.065	-2.631	-0.257
G14 N	T1	-10.726	-13.229	-185.542	3.148	-0.452	-1.276
G14 F	T1	-12.606	-8.166	-190.568	1.628	-0.174	-1.067
G15	T1	-12.430	1.749	-188.176	0.361	0.042	-0.395

*** Segment G end *** Line # 79319818

*** Segment H begin *** Line #

H00	T1	-5.500	0.000	-186.800	0.000	0.000	0.000
H01 N	T1	-5.723	0.000	-187.389	0.002	-0.175	0.036
H01 F	T1	-6.970	0.269	-186.985	-0.111	-0.877	-0.062
H02	T1	-8.633	0.871	-183.666	0.026	-1.189	-0.038
H03 N	T1	-10.195	1.442	-180.544	-0.067	-0.960	-0.040
H03 F	T1	-11.815	1.782	-179.976	-0.060	-0.485	0.064
H04 N	T1	-12.109	4.805	-187.369	-0.022	0.169	-0.105
H04 F	T1	-12.179	4.552	-187.952	0.078	0.077	-0.166
H05 N	T1	-13.145	3.568	-188.527	0.146	0.055	-0.191
H05 F	T1	-13.018	2.585	-188.304	0.251	0.026	-0.298
H06	T1	-12.488	2.201	-187.851	0.263	0.029	-0.304
H07 N	T1	-9.617	-0.387	-185.242	0.187	0.001	-0.172
H07 F	T1	-8.985	-0.745	-184.955	0.136	-0.030	0.029
H08 N	T1	-6.014	-1.814	-185.413	0.051	-0.031	0.088
H08 F	T1	-5.500	-1.500	-185.500	0.000	0.000	0.000
H09	T1	-5.500	-1.500	-185.500	0.000	0.000	0.000

*** Segment H end *** Line #

*** Segment I begin *** Line #

Point name	Load combination	TRANSLATIONS (mm)			ROTATIONS (deg)		
		X	Y	Z	X	Y	Z
H02	T1	-8.633	0.871	-183.666	0.026	-1.189	-0.038
I01	T1	-10.570	0.761	-184.122	0.095	-1.334	-0.056
*** Segment I end		*** Line #					
*** Segment J begin		*** Line #					
H06	T1	-12.488	2.201	-187.851	0.263	0.029	-0.304
G15	T1	-12.430	1.749	-188.176	0.361	0.042	-0.395
*** Segment J end		*** Line #					
*** Segment K begin		*** Line #					
I01	T1	-10.570	0.761	-184.122	0.095	-1.334	-0.056
K01 N	T1	-17.265	-0.067	-185.076	0.286	-1.748	-0.094
K01 F	T1	-22.180	-1.476	-180.293	0.709	-3.102	-0.299
K02 N	T1	-27.793	-11.240	-83.646	2.160	-4.003	-0.465
K02 F	T1	-27.814	-12.054	-76.776	2.248	-3.935	-0.510
K03 N	T1	-24.703	-19.542	-16.083	2.670	-3.143	-0.537
K03 F	T1	-23.247	-20.179	-8.719	2.580	-2.747	-0.491
K04 N	T1	-17.723	-18.259	-8.546	2.085	-2.027	-0.406
K04 F	T1	-13.194	-14.612	-8.160	1.523	-1.787	-0.117
K05 N	T1	0.506	-3.901	-6.335	1.077	-1.528	0.007
K05 F	T1	2.847	-2.023	-5.047	0.593	-1.242	-0.098
K06	T1	0.136	-0.136	-0.029	0.014	-0.089	-0.002
K07	T1	0.000	0.000	0.000	0.000	0.000	0.000
*** Segment K end		*** Line #					

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 8

R E S T R A I N T R E A C T I O N S

Point name	Load combination	FORCES (N)				MOMENTS (Nm)			
		X	Y	Z	Result	X	Y	Z	Result
A01 N	Anchor T1	538	3943	30198	30459	25512	-2131	8423	26951
A09 F	Anchor T1	609	5045	28403	28854	22956	2510	-9707	25050
B04 F	Anchor T1	-1554	-9556	-55215	56057	-21862	-443	-29	21867
F09	Anchor T1	141	526	-2663	2718	1549	-3682	-874	4089
G09	Anchor T1	-210	-779	-1589	1782	-604	-1033	444	1276
H00	Anchor T1	1081	231	2743	2958	-2	-1634	270	1656
H08 F	Anchor T1	-243	583	96	639	138	-47	204	251
K07	Anchor T1	-361	7	-1973	2006	19	-2368	-54	2368

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 9

G L O B A L F O R C E S & M O M E N T S

Point name	Load combination	FORCES (N)				MOMENTS (Nm)			
		X	Y	Z	Result	X	Y	Z	Result
*** Segment A begin *** Line # 79319818									
A00	T1	0	0	0	0	0	0	0	0
A01 N-	T1	0	0	0	0	0	0	0	0
A01 N+	T1	-538	-3943	-30198	30459	-25512	2131	-8423	26951
A01 F	T1	-538	-3943	-30198	30459	-12947	-16078	-6269	21574
A02 N	T1	-538	-3943	-30198	30459	10270	-15689	-6733	19924
A02 F	T1	-538	-3943	-30198	30459	22835	2943	-9390	24865
A03	T1	-538	-3943	-30198	30459	22835	3035	-9402	24881
A04	T1	-538	-3943	-30198	30459	22835	18042	-11361	31242
A05 -	T1	-538	-3943	-30198	30459	22835	39483	-14161	47759
A05 +	T1	609	5045	28403	28854	-20501	35960	-14718	43932
A06	T1	609	5045	28403	28854	-20501	15794	-11136	28173
A07	T1	609	5045	28403	28854	-20501	1592	-8613	22294
A08 N	T1	609	5045	28403	28854	-20501	1592	-8613	22294
A08 F	T1	609	5045	28403	28854	-9207	-15495	-5820	18940
A09 N	T1	609	5045	28403	28854	11662	-15054	-6346	20072
A09 F-	T1	609	5045	28403	28854	22956	2510	-9707	25050
A09 F+	T1	0	0	0	0	0	0	0	0
A10	T1	0	0	0	0	0	0	0	0
*** Segment A end *** Line # 79319818									
*** Segment B begin *** Line # 79319818									
A05	T1	-1146	-8988	-58601	59297	43336	3523	557	43483
B01	T1	-1146	-8988	-58601	59297	38753	4108	557	38974
B02 -	T1	-1146	-8988	-58601	59297	29091	5340	557	29582
B02 +	T1	-1554	-9556	-55215	56057	28376	-4051	-819	28675
B03 -	T1	-1554	-9556	-55215	56057	20597	-2786	-819	20801

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 10

G L O B A L F O R C E S & M O M E N T S

Point name	Load combination	FORCES (N)				MOMENTS (Nm)			
		X	Y	Z	Result	X	Y	Z	Result
B03 +	T1	-1554	-9556	-55215	56057	20597	-2786	-819	20801
B04 N	T1	-1554	-9556	-55215	56057	11041	-1232	-819	11140
B04 F-	T1	-1554	-9556	-55215	56057	-21862	-443	-29	21867
B04 F+	T1	0	0	0	0	0	0	0	0
B05	T1	0	0	0	0	0	0	0	0
*** Segment B end *** Line # 79319818									
*** Segment C begin *** Line # 79319818									
B02	T1	408	568	-3386	3458	715	9392	1376	9519
C01	T1	408	568	-3386	3458	715	8193	1174	8308
*** Segment C end *** Line # 79319818									
*** Segment D begin *** Line # 79319818									
B03	T1	0	0	0	0	0	0	0	0
D01	T1	0	0	0	0	0	0	0	0
*** Segment D end *** Line # 79319818									
*** Segment E begin *** Line # 79319818									
E00	T1	-267	-42	723	772	831	-281	293	925
E01	T1	-267	-42	723	772	831	-367	288	953
*** Segment E end *** Line # 79319818									
*** Segment F begin *** Line # 79319818									
C01	T1	408	568	-3386	3458	715	8193	1174	8308
F01 N	T1	408	568	-3386	3458	715	4905	622	4996
F01 F	T1	408	568	-3386	3458	-46	4122	399	4141
E01 -	T1	408	568	-3386	3458	-2014	4101	159	4571
E01 +	T1	141	526	-2663	2718	-1183	3733	447	3942
F10	T1	141	526	-2663	2718	-2487	3727	377	4496
F03 N	T1	141	526	-2663	2718	-3730	3721	310	5278

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 11

G L O B A L F O R C E S & M O M E N T S

Point name	Load combination	FORCES (N)				MOMENTS (Nm)			
		X	Y	Z	Result	X	Y	Z	Result
F03 F	T1	141	526	-2663	2718	-4316	3108	158	5321
F04 N	T1	141	526	-2663	2718	-4244	-1073	-664	4428
F04 F	T1	141	526	-2663	2718	-4124	-1662	-774	4513
F05 N	T1	141	526	-2663	2718	-3728	-1768	-774	4198
F05 F	T1	141	526	-2663	2718	-2998	-1800	-742	3574
F11	T1	141	526	-2663	2718	-2276	-1800	-704	2986
F06 N	T1	141	526	-2663	2718	3567	-1800	-396	4015
F06 F	T1	141	526	-2663	2718	4057	-1768	-364	4440
F07 N	T1	141	526	-2663	2718	1670	-1131	-364	2049
F07 F	T1	141	526	-2663	2718	1549	-1708	-484	2356
F08	T1	141	526	-2663	2718	1549	-3549	-848	3964
F09	T1	141	526	-2663	2718	1549	-3682	-874	4089
*** Segment F end *** Line # 79319818									
*** Segment G begin *** Line # 79319818									
E00	T1	267	42	-723	772	-831	281	-293	925
G01 N	T1	267	42	-723	772	-831	93	-304	890
G01 F	T1	267	42	-723	772	-748	14	-278	798
G02 N	T1	267	42	-723	772	315	121	121	359
G02 F	T1	267	42	-723	772	391	58	146	422
G03 N	T1	267	42	-723	772	384	-376	118	550
G03 F	T1	267	42	-723	772	379	-410	114	569
G04 N	T1	267	42	-723	772	284	190	114	360
G04 F	T1	267	42	-723	772	216	186	89	298
G05 N	T1	267	42	-723	772	-409	-124	-161	456
G05 F	T1	267	42	-723	772	-452	-194	-181	524
G06	T1	267	42	-723	772	-452	-194	-181	524

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 12

G L O B A L F O R C E S & M O M E N T S

Point name	Load combination	FORCES (N)				MOMENTS (Nm)			
		X	Y	Z	Result	X	Y	Z	Result
G07 N	T1	267	42	-723	772	-453	-405	-193	637
G07 F	T1	267	42	-723	772	-456	-458	-198	676
G08	T1	267	42	-723	772	-456	-458	-198	676
G09 -	T1	267	42	-723	772	-460	-452	-199	675
G09 +	T1	477	821	866	1285	144	581	-643	878
G10	T1	477	821	866	1285	117	492	-544	742
G11 N	T1	477	821	866	1285	54	278	-306	417
G11 F	T1	477	821	866	1285	-42	256	-232	348
G12 N	T1	477	821	866	1285	-578	568	-232	843
G12 F	T1	477	821	866	1285	-677	521	-133	864
G13 N	T1	477	821	866	1285	-677	-217	567	910
G13 F	T1	477	821	866	1285	-572	-322	609	896
G14 N	T1	477	821	866	1285	925	-322	-217	1003
G14 F	T1	477	821	866	1285	931	-264	-275	1006
G15	T1	477	821	866	1285	417	34	-275	501
*** Segment G end *** Line # 79319818									
*** Segment H begin *** Line #									
H00	T1	-1081	-231	-2743	2958	2	1634	-270	1656
H01 N	T1	-1081	-231	-2743	2958	-34	1801	-270	1822
H01 F	T1	-1081	-231	-2743	2958	-242	1740	-183	1766
H02 -	T1	-1081	-231	-2743	2958	-752	1290	56	1494
H02 +	T1	-721	-238	-770	1081	419	-1137	-125	1218
H03 N	T1	-721	-238	-770	1081	277	-1238	39	1269
H03 F	T1	-721	-238	-770	1081	199	-1208	103	1229
H04 N	T1	-721	-238	-770	1081	-259	180	103	332
H04 F	T1	-721	-238	-770	1081	-286	195	123	367

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 13

G L O B A L F O R C E S & M O M E N T S

Point name	Load combination	FORCES (N)				MOMENTS (Nm)			
		X	Y	Z	Result	X	Y	Z	Result
H05 N	T1	-721	-238	-770	1081	-303	37	188	358
H05 F	T1	-721	-238	-770	1081	-222	-26	132	260
H06 -	T1	-721	-238	-770	1081	-145	-26	60	159
H06 +	T1	-243	583	96	639	203	48	-215	299
H07 N	T1	-243	583	96	639	138	48	-379	406
H07 F	T1	-243	583	96	639	127	37	-340	365
H08 N	T1	-243	583	96	639	127	-36	110	172
H08 F-	T1	-243	583	96	639	138	-47	204	251
H08 F+	T1	0	0	0	0	0	0	0	0
H09	T1	0	0	0	0	0	0	0	0
*** Segment H end *** Line #									
*** Segment I begin *** Line #									
H02	T1	-361	7	-1973	2006	-1171	2427	181	2701
I01	T1	-361	7	-1973	2006	-1160	2470	179	2734
*** Segment I end *** Line #									
*** Segment J begin *** Line #									
H06	T1	-477	-821	-866	1285	-348	-75	275	449
G15	T1	-477	-821	-866	1285	-417	-34	275	501
*** Segment J end *** Line #									
*** Segment K begin *** Line #									
I01	T1	-361	7	-1973	2006	-1160	2470	179	2734
K01 N	T1	-361	7	-1973	2006	-1158	2560	179	2815
K01 F	T1	-361	7	-1973	2006	-1157	2376	178	2649
K02 N	T1	-361	7	-1973	2006	-1157	-506	168	1274
K02 F	T1	-361	7	-1973	2006	-1091	-665	155	1287
K03 N	T1	-361	7	-1973	2006	32	-1789	-54	1790

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 14

G L O B A L F O R C E S & M O M E N T S

Point name	Load combination	FORCES (N)				MOMENTS (Nm)			
		X	Y	Z	Result	X	Y	Z	Result
K03 F	T1	-361	7	-1973	2006	350	-1789	-112	1826
K04 N	T1	-361	7	-1973	2006	1274	-865	-278	1565
K04 F	T1	-361	7	-1973	2006	1432	-747	-306	1644
K05 N	T1	-361	7	-1973	2006	1429	-918	-306	1726
K05 F	T1	-361	7	-1973	2006	1269	-1118	-278	1714
K06	T1	-361	7	-1973	2006	89	-2298	-66	2301
K07	T1	-361	7	-1973	2006	19	-2368	-54	2368

*** Segment K end *** Line #

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 15

ASME B31.3b (2001) CODE COMPLIANCE										
			(Moments in Nm)			(Stress in N/mm2)				
Point	Load	In-Pl.	Out-Pl.	Torsion	S.I.F		Eq. Load	Code	Code	
name	combination	Moment	Moment	Moment	In	Out	no. type	Stress	Allow.	
*** Segment A begin *** Line # 79319818										
A00	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147	
A01 N-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147	
A01 N+	Max P						(3a) HOOP	0	71	
	Max P	0	0		4.43	3.69	(18) SUST	0	71	
	Cold to T1	7822	3781	25512	4.43	3.69	(17) DISP	61	147	
A01 F-	Max P						(3a) HOOP	0	71	
	Max P	0	0		4.43	3.69	(18) SUST	0	71	
	Cold to T1	5533	12947	16346	4.43	3.69	(17) DISP	76	147	
A01 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	12947	5533	16346	1.00	1.00	(17) DISP	29	147	
A02 N-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	10270	4926	16346	1.00	1.00	(17) DISP	27	147	
A02 N+	Max P						(3a) HOOP	0	71	
	Max P	0	0		4.43	3.69	(18) SUST	0	71	
	Cold to T1	4926	10270	16346	4.43	3.69	(17) DISP	63	147	
A02 F-	Max P						(3a) HOOP	0	71	
	Max P	0	0		4.43	3.69	(18) SUST	0	71	
	Cold to T1	9085	3781	22835	4.43	3.69	(17) DISP	65	147	
A02 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	2943	9390	22835	1.00	1.00	(17) DISP	33	147	
A03	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	3035	9402	22835	1.00	1.00	(17) DISP	33	147	
A04	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	18042	11361	22835	1.00	1.00	(17) DISP	27	147	
A05 -	Max P						(3a) HOOP	0	71	
	Max P	0	0		4.08	5.10	(18) SUST	0	71	
	Cold to T1	39483	14161	22835	4.08	5.10	(17) DISP	152	147**	
	with Sus. load margin						(17)	152	218	

ASME B31.3b (2001) CODE COMPLIANCE									
Point name	Load combination	(Moments in Nm)			S.I.F		(Stress in N/mm2)		
		In-Pl. Moment	Out-Pl. Moment	Torsion Moment	In	Out	Eq. Load no. type	Code Stress	Code Allow.
A05	+ Max P						(3a) HOOP	0	71
	Max P	0	0		4.08	5.10	(18) SUST	0	71
	Cold to T1	35960	14718	20501	4.08	5.10	(17) DISP	141	147
A06	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	15794	11136	20501	1.00	1.00	(17) DISP	24	147
A07	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	1592	8613	20501	1.00	1.00	(17) DISP	30	147
A08 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	1592	8613	20501	1.00	1.00	(17) DISP	30	147
A08 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		4.43	3.69	(18) SUST	0	71
	Cold to T1	7622	4317	20501	4.43	3.69	(17) DISP	57	147
A08 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		4.43	3.69	(18) SUST	0	71
	Cold to T1	5501	9207	15611	4.43	3.69	(17) DISP	60	147
A08 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	9207	5501	15611	1.00	1.00	(17) DISP	25	147
A09 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	11662	4815	15611	1.00	1.00	(17) DISP	27	147
A09 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		4.43	3.69	(18) SUST	0	71
	Cold to T1	4815	11662	15611	4.43	3.69	(17) DISP	68	147
A09 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		4.43	3.69	(18) SUST	0	71
	Cold to T1	9050	4317	22956	4.43	3.69	(17) DISP	66	147
A09 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147
A10	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147

*** Segment A end *** Line # 79319818

*** Segment B begin *** Line # 79319818

ASME B31.3b (2001) CODE COMPLIANCE										
		(Moments in Nm)						(Stress in N/mm2)		
Point	Load	In-Pl.	Out-Pl.	Torsion	S.I.F		Eq. Load	Code	Code	
name	combination	Moment	Moment	Moment	In	Out	no. type	Stress	Allow.	
A05	Max P						(3a) HOOP	0	71	
	Max P	0	0		4.08	5.10	(18) SUST	0	71	
	Cold to T1	3523	43336	557	4.08	5.10	(17) DISP	189	147**	
	with Sus. load margin						(17)	189	218	
B01 -	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	4108	38753	557	1.00	1.00	(17) DISP	33	147	
B01 +	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	4108	38753	557	1.00	1.00	(17) DISP	20	147	
B02 -	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.96	3.61	(18) SUST	0	71	
	Cold to T1	5340	29091	557	2.96	3.61	(17) DISP	56	147	
B02 +	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.96	3.61	(18) SUST	0	71	
	Cold to T1	4051	28376	819	2.96	3.61	(17) DISP	54	147	
B03 -	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.96	3.61	(18) SUST	0	71	
	Cold to T1	2786	20597	819	2.96	3.61	(17) DISP	39	147	
B03 +	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.96	3.61	(18) SUST	0	71	
	Cold to T1	2786	20597	819	2.96	3.61	(17) DISP	64	147	
B04 N-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	1232	11041	819	1.00	1.00	(17) DISP	9	147	
B04 N+	Max P						(3a) HOOP	0	71	
	Max P	0	0		6.78	5.65	(18) SUST	0	71	
	Cold to T1	11041	1232	819	6.78	5.65	(17) DISP	64	147	
B04 F-	Max P						(3a) HOOP	0	71	
	Max P	0	0		6.78	5.65	(18) SUST	0	71	
	Cold to T1	21862	29	443	6.78	5.65	(17) DISP	126	147	
B04 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147	
B05	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147	

*** Segment B end *** Line # 79319818

*** Segment C begin *** Line # 79319818

REBIS
AutoPIPE 6.20 RESULT PAGE 18

ASME B31.3b (2001) CODE COMPLIANCE (Stress in N/mm2)											
Point name	Load combination	In-Pl. Moment	Out-Pl. Moment	Torsion Moment	S.I.F		Eq. no.	Load type	Code Stress	Code Allow.	
					In	Out					
B02	Max P						(3a)	HOOP	0	71	
	Max P	0	0		2.96	3.61	(18)	SUST	0	71	
	Cold to T1	9392	1376	715	2.96	3.61	(17)	DISP	225	147**	
	with Sus. load margin						(17)		225	218**	
C01	Max P						(3a)	HOOP	0	71	
	Max P	0	0		1.00	1.00	(18)	SUST	0	71	
	Cold to T1	8193	1174	715	1.00	1.00	(17)	DISP	19	147	
*** Segment C end *** Line # 79319818											
*** Segment D begin *** Line # 79319818											
*** Segment D end *** Line # 79319818											
*** Segment E begin *** Line # 79319818											
E00	Max P						(3a)	HOOP	0	71	
	Max P	0	0		1.00	1.00	(18)	SUST	0	71	
	Cold to T1	281	293	831	1.00	1.00	(17)	DISP	101	147	
E01	Max P						(3a)	HOOP	0	71	
	Max P	0	0		1.85	2.14	(18)	SUST	0	71	
	Cold to T1	255	391	831	1.85	2.14	(17)	DISP	106	147	
*** Segment E end *** Line # 79319818											
*** Segment F begin *** Line # 79319818											
C01	Max P						(3a)	HOOP	0	71	
	Max P	0	0		1.00	1.00	(18)	SUST	0	71	
	Cold to T1	8193	1174	715	1.00	1.00	(17)	DISP	60	147	
F01 N-	Max P						(3a)	HOOP	0	71	
	Max P	0	0		1.00	1.00	(18)	SUST	0	71	
	Cold to T1	4905	622	715	1.00	1.00	(17)	DISP	36	147	
F01 N+	Max P						(3a)	HOOP	0	71	
	Max P	0	0		2.27	1.89	(18)	SUST	0	71	
	Cold to T1	1048	4832	715	2.27	1.89	(17)	DISP	68	147	
F01 F-	Max P						(3a)	HOOP	0	71	
	Max P	0	0		2.27	1.89	(18)	SUST	0	71	
	Cold to T1	757	46	4071	2.27	1.89	(17)	DISP	32	147	
F01 F+	Max P						(3a)	HOOP	0	71	
	Max P	0	0		1.00	1.00	(18)	SUST	0	71	
	Cold to T1	46	757	4071	1.00	1.00	(17)	DISP	30	147	
E01 -	Max P						(3a)	HOOP	0	71	
	Max P	0	0		1.85	2.14	(18)	SUST	0	71	
	Cold to T1	516	2014	4071	1.85	2.14	(17)	DISP	43	147	

79319818 KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 19

Point name	Load combination	ASME B31.3b (2001)			CODE COMPLIANCE			(Stress in N/mm2)		
		In-Pl. Moment	Out-Pl. Moment	Torsion Moment	S.I.F In	S.I.F Out	Eq. Load no.	Load type	Code Stress	Code Allow.
E01	+ Max P							(3a) HOOP	0	71
	Max P	0	0		1.85	2.14	(18)	SUST	0	71
	Cold to T1	770	1183	3680	1.85	2.14	(17)	DISP	34	147
F10	Max P							(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	2487	700	3680	1.00	1.00	(17)	DISP	32	147
F03 N-	Max P							(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	3730	633	3680	1.00	1.00	(17)	DISP	38	147
F03 N+	Max P							(3a) HOOP	0	71
	Max P	0	0		2.25	1.88	(18)	SUST	0	71
	Cold to T1	955	3660	3680	2.25	1.88	(17)	DISP	58	147
F03 F-	Max P							(3a) HOOP	0	71
	Max P	0	0		2.25	1.88	(18)	SUST	0	71
	Cold to T1	801	3050	4286	2.25	1.88	(17)	DISP	53	147
F03 F+	Max P							(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	3108	534	4286	1.00	1.00	(17)	DISP	38	147
F04 N-	Max P							(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1073	292	4286	1.00	1.00	(17)	DISP	32	147
F04 N+	Max P							(3a) HOOP	0	71
	Max P	0	0		2.27	1.89	(18)	SUST	0	71
	Cold to T1	1073	292	4286	2.27	1.89	(17)	DISP	36	147
F04 F-	Max P							(3a) HOOP	0	71
	Max P	0	0		2.27	1.89	(18)	SUST	0	71
	Cold to T1	1662	4124	774	2.27	1.89	(17)	DISP	62	147
F04 F+	Max P							(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1662	4124	774	1.00	1.00	(17)	DISP	32	147
F05 N-	Max P							(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1768	3728	774	1.00	1.00	(17)	DISP	30	147
F05 N+	Max P							(3a) HOOP	0	71
	Max P	0	0		2.27	1.89	(18)	SUST	0	71
	Cold to T1	3728	1768	774	2.27	1.89	(17)	DISP	66	147
F05 F-	Max P							(3a) HOOP	0	71
	Max P	0	0		2.27	1.89	(18)	SUST	0	71
	Cold to T1	2998	742	1800	2.27	1.89	(17)	DISP	52	147

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 20

ASME B31.3b (2001) CODE COMPLIANCE										
Point name	Load combination	(Moments in Nm)			S.I.F		(Stress in N/mm2)		Code Stress	Code Allow.
		In-Pl. Moment	Out-Pl. Moment	Torsion Moment	In	Out	Eq. Load no. type			
F05 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	2998	742	1800	1.00	1.00	(17) DISP	26	147	
F11	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	2276	704	1800	1.00	1.00	(17) DISP	21	147	
F06 N-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	3567	396	1800	1.00	1.00	(17) DISP	29	147	
F06 N+	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.27	1.89	(18) SUST	0	71	
	Cold to T1	3567	396	1800	2.27	1.89	(17) DISP	60	147	
F06 F-	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.27	1.89	(18) SUST	0	71	
	Cold to T1	4057	1768	364	2.27	1.89	(17) DISP	70	147	
F06 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	1768	4057	364	1.00	1.00	(17) DISP	32	147	
F07 N-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	1131	1670	364	1.00	1.00	(17) DISP	15	147	
F07 N+	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.27	1.89	(18) SUST	0	71	
	Cold to T1	1131	1670	364	2.27	1.89	(17) DISP	29	147	
F07 F-	Max P						(3a) HOOP	0	71	
	Max P	0	0		2.27	1.89	(18) SUST	0	71	
	Cold to T1	1708	484	1549	2.27	1.89	(17) DISP	31	147	
F07 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	1708	484	1549	1.00	1.00	(17) DISP	17	147	
F08	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	3549	848	1549	1.00	1.00	(17) DISP	29	147	
F09	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	3682	874	1549	1.00	1.00	(17) DISP	29	147	

*** Segment F end *** Line # 79319818

*** Segment G begin *** Line # 79319818

Point name	Load combination	ASME B31.3b (2001) CODE COMPLIANCE (Moments in Nm)			S.I.F		(Stress in N/mm2)		Eq. Load no. type	Code Stress	Code Allow.
		In-Pl. Moment	Out-Pl. Moment	Torsion Moment	In	Out					
E00	Max P				1.00	1.00	(3a)	HOOP		0	71
	Max P	0	0		1.00	1.00	(18)	SUST		0	71
	Cold to T1	281	293	831	1.00	1.00	(17)	DISP		101	147
G01 N-	Max P				1.00	1.00	(3a)	HOOP		0	71
	Max P	0	0		1.00	1.00	(18)	SUST		0	71
	Cold to T1	93	304	831	1.00	1.00	(17)	DISP		97	147
G01 N+	Max P				1.27	1.06	(3a)	HOOP		0	71
	Max P	0	0		1.27	1.06	(18)	SUST		0	71
	Cold to T1	269	169	831	1.27	1.06	(17)	DISP		100	147
G01 F-	Max P				1.27	1.06	(3a)	HOOP		0	71
	Max P	0	0		1.27	1.06	(18)	SUST		0	71
	Cold to T1	265	748	86	1.27	1.06	(17)	DISP		95	147
G01 F+	Max P				1.00	1.00	(3a)	HOOP		0	71
	Max P	0	0		1.00	1.00	(18)	SUST		0	71
	Cold to T1	748	265	86	1.00	1.00	(17)	DISP		87	147
G02 N-	Max P				1.00	1.00	(3a)	HOOP		0	71
	Max P	0	0		1.00	1.00	(18)	SUST		0	71
	Cold to T1	315	148	86	1.00	1.00	(17)	DISP		39	147
G02 N+	Max P				1.27	1.06	(3a)	HOOP		0	71
	Max P	0	0		1.27	1.06	(18)	SUST		0	71
	Cold to T1	223	268	86	1.27	1.06	(17)	DISP		45	147
G02 F-	Max P				1.27	1.06	(3a)	HOOP		0	71
	Max P	0	0		1.27	1.06	(18)	SUST		0	71
	Cold to T1	249	5	340	1.27	1.06	(17)	DISP		51	147
G02 F+	Max P				1.00	1.00	(3a)	HOOP		0	71
	Max P	0	0		1.00	1.00	(18)	SUST		0	71
	Cold to T1	58	242	340	1.00	1.00	(17)	DISP		46	147
G03 N-	Max P				1.00	1.00	(3a)	HOOP		0	71
	Max P	0	0		1.00	1.00	(18)	SUST		0	71
	Cold to T1	376	213	340	1.00	1.00	(17)	DISP		60	147
G03 N+	Max P				1.27	1.06	(3a)	HOOP		0	71
	Max P	0	0		1.27	1.06	(18)	SUST		0	71
	Cold to T1	376	213	340	1.27	1.06	(17)	DISP		69	147
G03 F-	Max P				1.27	1.06	(3a)	HOOP		0	71
	Max P	0	0		1.27	1.06	(18)	SUST		0	71
	Cold to T1	410	379	114	1.27	1.06	(17)	DISP		73	147
G03 F+	Max P				1.00	1.00	(3a)	HOOP		0	71
	Max P	0	0		1.00	1.00	(18)	SUST		0	71
	Cold to T1	410	379	114	1.00	1.00	(17)	DISP		62	147

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 22

ASME B31.3b (2001) CODE COMPLIANCE									
			(Moments in Nm)			(Stress in N/mm2)			
Point name	Load combination	In-Pl. Moment	Out-Pl. Moment	Torsion Moment	S.I.F		Eq. Load no. type	Code Stress	Code Allow.
					In	Out			
G04 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	190	284	114	1.00	1.00	(17) DISP	39	147
G04 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	341	23	114	1.27	1.06	(17) DISP	49	147
G04 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	280	78	67	1.27	1.06	(17) DISP	41	147
G04 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	280	78	67	1.00	1.00	(17) DISP	33	147
G05 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	416	175	67	1.00	1.00	(17) DISP	50	147
G05 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	175	416	71	1.27	1.06	(17) DISP	55	147
G05 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	187	224	435	1.27	1.06	(17) DISP	60	147
G05 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	194	219	434	1.00	1.00	(17) DISP	57	147
G06	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	194	219	434	1.00	1.00	(17) DISP	57	147
G07 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	405	232	434	1.00	1.00	(17) DISP	70	147
G07 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	405	232	434	1.27	1.06	(17) DISP	78	147
G07 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	458	492	73	1.27	1.06	(17) DISP	86	147
G07 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	458	492	74	1.00	1.00	(17) DISP	74	147

ASME B31.3b (2001) CODE COMPLIANCE									
Point name	Load combination	(Moments in Nm)			S.I.F		(Stress in N/mm2)		Code Stress
		In-Pl. Moment	Out-Pl. Moment	Torsion Moment	In	Out	Eq. Load no. type	Code Allow.	
G08	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	458	492	74	1.00	1.00	(17) DISP	74	147
G10	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	492	555	27	1.00	1.00	(17) DISP	81	147
G11 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	278	309	27	1.00	1.00	(17) DISP	46	147
G11 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	278	309	27	1.27	1.06	(17) DISP	53	147
G11 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	256	42	232	1.27	1.06	(17) DISP	44	147
G11 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	256	42	232	1.00	1.00	(17) DISP	38	147
G12 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	568	578	232	1.00	1.00	(17) DISP	92	147
G12 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	568	578	232	1.27	1.06	(17) DISP	107	147
G12 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	521	133	677	1.27	1.06	(17) DISP	105	147
G12 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	521	133	677	1.00	1.00	(17) DISP	94	147
G13 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	217	567	677	1.00	1.00	(17) DISP	99	147
G13 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	567	217	677	1.27	1.06	(17) DISP	111	147
G13 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.27	1.06	(18) SUST	0	71
	Cold to T1	609	572	322	1.27	1.06	(17) DISP	113	147

ASME B31.3b (2001) CODE COMPLIANCE										
			(Moments in Nm)			(Stress in N/mm2)				
Point name	Load combination	In-Pl. Moment	Out-Pl. Moment	Torsion Moment	S.I.F		Eq. Load no.	Load type	Code Stress	Code Allow.
G13 F+	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	572	609	322	1.00	1.00	(17)	DISP	98	147
G14 N-	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	925	217	322	1.00	1.00	(17)	DISP	110	147
G14 N+	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.27	1.06	(18)	SUST	0	71
	Cold to T1	925	217	322	1.27	1.06	(17)	DISP	136	147
G14 F-	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.27	1.06	(18)	SUST	0	71
	Cold to T1	931	264	275	1.27	1.06	(17)	DISP	136	147
G14 F+	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	264	931	275	1.00	1.00	(17)	DISP	110	147
G15	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	34	417	275	1.00	1.00	(17)	DISP	55	147
*** Segment G end *** Line # 79319818										
*** Segment H begin *** Line #										
H00	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1634	2	270	1.00	1.00	(17)	DISP	59	147
H01 N-	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1801	34	270	1.00	1.00	(17)	DISP	64	147
H01 N+	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.78	1.48	(18)	SUST	0	71
	Cold to T1	1250	1297	270	1.78	1.48	(17)	DISP	104	147
H01 F-	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.78	1.48	(18)	SUST	0	71
	Cold to T1	1059	63	1412	1.78	1.48	(17)	DISP	83	147
H01 F+	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1059	63	1412	1.00	1.00	(17)	DISP	62	147
H02 -	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.48	1.63	(18)	SUST	0	71
	Cold to T1	381	306	1412	1.48	1.63	(17)	DISP	57	147

ASME B31.3b (2001) CODE COMPLIANCE										
Point name	Load combination	(Moments in Nm)			S.I.F		(Stress in N/mm2)		Eq. Load no. type	Code Code Stress Allow.
		In-Pl. Moment	Out-Pl. Moment	Torsion Moment	In	Out				
H02 +	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.48	1.63	(18)	SUST		0 71
	Cold to T1	507	314	1062	1.48	1.63	(17)	DISP		49 147
H03 N-	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.00	1.00	(18)	SUST		0 71
	Cold to T1	679	148	1062	1.00	1.00	(17)	DISP		45 147
H03 N+	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.78	1.48	(18)	SUST		0 71
	Cold to T1	679	148	1062	1.78	1.48	(17)	DISP		57 147
H03 F-	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.78	1.48	(18)	SUST		0 71
	Cold to T1	713	995	103	1.78	1.48	(17)	DISP		69 147
H03 F+	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.00	1.00	(18)	SUST		0 71
	Cold to T1	1208	199	103	1.00	1.00	(17)	DISP		43 147
H04 N-	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.00	1.00	(18)	SUST		0 71
	Cold to T1	180	259	103	1.00	1.00	(17)	DISP		12 147
H04 N+	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.78	1.48	(18)	SUST		0 71
	Cold to T1	180	259	103	1.78	1.48	(17)	DISP		18 147
H04 F-	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.78	1.48	(18)	SUST		0 71
	Cold to T1	195	192	244	1.78	1.48	(17)	DISP		18 147
H04 F+	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.00	1.00	(18)	SUST		0 71
	Cold to T1	195	192	244	1.00	1.00	(17)	DISP		13 147
H05 N-	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.00	1.00	(18)	SUST		0 71
	Cold to T1	37	260	244	1.00	1.00	(17)	DISP		13 147
H05 N+	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.78	1.48	(18)	SUST		0 71
	Cold to T1	260	37	244	1.78	1.48	(17)	DISP		19 147
H05 F-	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.78	1.48	(18)	SUST		0 71
	Cold to T1	185	180	26	1.78	1.48	(17)	DISP		15 147
H05 F+	Max P						(3a)	HOOP		0 71
	Max P	0	0		1.00	1.00	(18)	SUST		0 71
	Cold to T1	222	132	26	1.00	1.00	(17)	DISP		9 147

ASME B31.3b (2001) CODE COMPLIANCE										
		(Moments in Nm)						(Stress in N/mm2)		
Point	Load	In-Pl.	Out-Pl.	Torsion	S.I.F		Eq. Load	Code	Code	
name	combination	Moment	Moment	Moment	In	Out	no. type	Stress	Allow.	
H06 -	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.48	1.63	(18) SUST	0	71	
	Cold to T1	145	60	26	1.48	1.63	(17) DISP	8	147	
H06 +	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.48	1.63	(18) SUST	0	71	
	Cold to T1	203	215	48	1.48	1.63	(17) DISP	16	147	
H07 N-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	138	379	48	1.00	1.00	(17) DISP	14	147	
H07 N+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.78	1.48	(18) SUST	0	71	
	Cold to T1	379	138	48	1.78	1.48	(17) DISP	25	147	
H07 F-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.78	1.48	(18) SUST	0	71	
	Cold to T1	340	37	127	1.78	1.48	(17) DISP	22	147	
H07 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	37	340	127	1.00	1.00	(17) DISP	13	147	
H08 N-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	36	110	127	1.00	1.00	(17) DISP	6	147	
H08 N+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.78	1.48	(18) SUST	0	71	
	Cold to T1	110	36	127	1.78	1.48	(17) DISP	8	147	
H08 F-	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.78	1.48	(18) SUST	0	71	
	Cold to T1	204	138	47	1.78	1.48	(17) DISP	15	147	
H08 F+	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147	
H09	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.00	1.00	(18) SUST	0	71	
	Cold to T1	0	0	0	1.00	1.00	(17) DISP	0	147	
*** Segment H end *** Line #										
*** Segment I begin *** Line #										
H02	Max P						(3a) HOOP	0	71	
	Max P	0	0		1.48	1.63	(18) SUST	0	71	
	Cold to T1	888	2519	399	1.48	1.63	(17) DISP	153	147**	
	with Sus. load margin						(17)	153	218	

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 27

ASME B31.3b (2001) CODE COMPLIANCE									
			(Moments in Nm)			(Stress in N/mm2)			
Point name	Load combination	In-Pl. Moment	Out-Pl. Moment	Torsion Moment	S.I.F In	S.I.F Out	Eq. Load no. type	Code Stress	Code Allow.
I01	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	926	2541	399	1.00	1.00	(17) DISP	97	147
*** Segment I end *** Line #									
*** Segment J begin *** Line #									
H06	Max P						(3a) HOOP	0	71
	Max P	0	0		1.48	1.63	(18) SUST	0	71
	Cold to T1	348	75	275	1.48	1.63	(17) DISP	49	147
G15	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	34	417	275	1.00	1.00	(17) DISP	55	147
*** Segment J end *** Line #									
*** Segment K begin *** Line #									
I01	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	2470	1160	179	1.00	1.00	(17) DISP	97	147
K01 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	2560	1158	179	1.00	1.00	(17) DISP	99	147
K01 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	2560	1158	179	1.78	1.48	(17) DISP	172	147**
	with Sus. load margin						(17)	172	218
K01 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	2376	178	1157	1.78	1.48	(17) DISP	155	147**
	with Sus. load margin						(17)	155	218
K01 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	2376	178	1157	1.00	1.00	(17) DISP	94	147
K02 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	506	168	1157	1.00	1.00	(17) DISP	45	147
K02 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	168	506	1157	1.78	1.48	(17) DISP	50	147

ASME B31.3b (2001) CODE COMPLIANCE									
Point name	Load combination	(Moments in Nm)			S.I.F		(Stress in N/mm2)		Code Stress
		In-Pl. Moment	Out-Pl. Moment	Torsion Moment	In	Out	Eq. Load no. type	Code Allow.	
K02 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	155	301	1242	1.78	1.48	(17) DISP	48	147
K02 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	301	155	1242	1.00	1.00	(17) DISP	45	147
K03 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	1288	54	1242	1.00	1.00	(17) DISP	63	147
K03 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	54	1288	1242	1.78	1.48	(17) DISP	80	147
K03 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	112	1017	1513	1.78	1.48	(17) DISP	76	147
K03 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	1017	112	1513	1.00	1.00	(17) DISP	65	147
K04 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	289	278	1513	1.00	1.00	(17) DISP	55	147
K04 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	289	278	1513	1.78	1.48	(17) DISP	58	147
K04 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	484	1541	306	1.78	1.48	(17) DISP	87	147
K04 F+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	747	1432	306	1.00	1.00	(17) DISP	58	147
K05 N-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.00	1.00	(18) SUST	0	71
	Cold to T1	918	1429	306	1.00	1.00	(17) DISP	61	147
K05 N+	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	361	1659	306	1.78	1.48	(17) DISP	90	147
K05 F-	Max P						(3a) HOOP	0	71
	Max P	0	0		1.78	1.48	(18) SUST	0	71
	Cold to T1	107	278	1688	1.78	1.48	(17) DISP	62	147

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 29

ASME B31.3b (2001) CODE COMPLIANCE										
		(Moments in Nm)					(Stress in N/mm2)			
Point name	Load combination	In-Pl. Moment	Out-Pl. Moment	Torsion Moment	S.I.F		Eq. no.	Load type	Code Stress	Code Allow.
K05 F+	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	107	278	1688	1.00	1.00	(17)	DISP	61	147
K06	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1562	66	1688	1.00	1.00	(17)	DISP	81	147
K07	Max P						(3a)	HOOP	0	71
	Max P	0	0		1.00	1.00	(18)	SUST	0	71
	Cold to T1	1661	54	1688	1.00	1.00	(17)	DISP	84	147

*** Segment K end *** Line #

S Y S T E M S U M M A R Y

Maximum displacements (mm)

Maximum X :	-62.010	Point : F05 F	Load Comb.: T1
Maximum Y :	-56.316	Point : F06 N	Load Comb.: T1
Maximum Z :	-204.488	Point : B04 N	Load Comb.: T1
Max. total:	204.718	Point : B04 N	Load Comb.: T1

Maximum rotations (deg)

Maximum X :	4.065	Point : G13 F	Load Comb.: T1
Maximum Y :	-4.003	Point : K02 N	Load Comb.: T1
Maximum Z :	-1.276	Point : G14 N	Load Comb.: T1
Max. total:	4.849	Point : G13 F	Load Comb.: T1

Maximum restraint forces (N)

Maximum X :	-1554	Point : B04 F	Load Comb.: T1
Maximum Y :	-9556	Point : B04 F	Load Comb.: T1
Maximum Z :	-55215	Point : B04 F	Load Comb.: T1
Max. total:	56057	Point : B04 F	Load Comb.: T1

Maximum restraint moments (Nm)

Maximum X :	25512	Point : A01 N	Load Comb.: T1
Maximum Y :	-3682	Point : F09	Load Comb.: T1
Maximum Z :	-9707	Point : A09 F	Load Comb.: T1
Max. total:	26951	Point : A01 N	Load Comb.: T1

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 31

S Y S T E M S U M M A R Y

Maximum pipe forces (N)

Maximum X :	-1554	Point : B02	Load Comb.: T1
Maximum Y :	-9556	Point : B02	Load Comb.: T1
Maximum Z :	-58601	Point : A05	Load Comb.: T1
Max. total:	59297	Point : A05	Load Comb.: T1

Maximum pipe moments (Nm)

Maximum X :	43336	Point : A05	Load Comb.: T1
Maximum Y :	39483	Point : A05	Load Comb.: T1
Maximum Z :	-14718	Point : A05	Load Comb.: T1
Max. total:	47759	Point : A05	Load Comb.: T1

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 32

S Y S T E M S U M M A R Y

Maximum displacement stress

Point	:	B02
Stress	N/mm2	: 225
Allowable	N/mm2	: 218
Ratio	:	1.03
Load combination	:	Cold to T1

79319818_KOMPLETT
07/18/2005 ASU KOSICE
02:54 PM

REBIS
AutoPIPE 6.20 RESULT PAGE 33

S Y S T E M S U M M A R Y

Maximum displacement stress ratio

Point	:	B02
Stress	N/mm2	: 225
Allowable	N/mm2	: 218
Ratio	:	1.03
Load combination	:	Cold to T1

* * * The system does not satisfy ASME B31.3 code requirements * * *
* * * for the selected options * * *