

	Projekt :	ASU No. 9, Kosice	Seite 61 von 198
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Loads of nozzles

THE CALCULATION IS ONLY CARRIED OUT FOR THE FOLLOWING POINTS:

Line	Point	Pos	Text for section
1	9	n	W13001 ST. N2, DN700 ABSOLUT
1	57	v	N15001 ST. N2, DN600 KS_0
2	68	v	A15001 ST. N4, DN700 ABSOLUT
2	70	n	A15001 ST. N3, DN700 ABSOLUT
7	122	v	N15001 ST. N1, DN600 KS_0
8	134	v	A15002 ST. N4, DN700 ABSOLUT
8	136	n	A15002 ST. N3, DN700 ABSOLUT
20	449	n	COLD-BOX ST. N , DN500 ABSOLUT
20	427	v	F15031 ST. N1, DN700 ABSOLUT
20	421	n	F15031 ST. N2, DN700 ABSOLUT
22	293	n	W15001 FL. N4, DN600 ABSOLUT
22	294	v	W15001 ST. N4, DN600 ABSOLUT
22	296	n	W15001 ST. N3, DN600 ABSOLUT
22	299	v	W15001 FL. N3, DN500 ABSOLUT
22	385	v	COLD-BOX ST. N2, DN700 ABSOLUT
49	471	n	N16007 ST. , DN500 ABSOLUT
49	473	v	N16007 ST. , DN500 ABSOLUT
49	479	n	AIR COMPRESSOR ST. 1.01 KS_1

SPECIAL COORDINATE SYSTEMS :

	<--- XS RICHTUNG --->			<--- YS RICHTUNG --->			<--- ZS RICHTUNG --->		
Name	X	Y	Z	X	Y	Z	X	Y	Z
KS_0	0.000	1.000	0.000	-1.000	0.000	0.000	0.000	0.000	1.000
KS_1	1.000	0.000	0.000	0.000	0.000	1.000	0.000	-1.000	0.000

THE FOLLOWING LOAD CASES ARE TO BE CONSIDERED:

Lc-File	Lc-Array	Lc-Name	calculated at:
Gew1.erg	G1	Weight	09.05.05 12:27:18
Betr1H.erg	T1	Operation1H	09.05.05 12:27:22
Betr2H.erg	T2	Operation2H	09.05.05 12:27:28
Betr6.erg	T3	Operation6	09.05.05 12:27:34
Betr1K.erg	T4	Operation1K	09.05.05 12:27:41
Betr2K.erg	T5	Operation2K	09.05.05 12:27:47
Wind1.erg	W1	Wind1-X	09.05.05 12:27:52
Wind1.erg	W2	Wind1-Y	09.05.05 12:27:52

	Projekt :	ASU No. 9, Kosice	Seite 62 von 198
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Line 1 Point 9 n W13001 ST. N2, DN700
Absolute Coordinate System

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	0.00 -0.01	1.72 0.00	-0.54 0.00	-0.007 0.323	-0.883 -0.002	-2.764 0.005
Operation1H	0.07 -0.01	1.66 0.00	1.82 0.00	-1.307 -0.923	0.186 -0.273	-2.856 0.986
Operation2H	-0.08 -0.01	1.65 0.00	1.82 0.00	0.829 -0.926	0.189 0.109	-2.855 -0.545
Operation6	-0.02 -0.01	1.70 0.00	11.86 0.00	-0.601 1.953	-2.478 -0.208	-2.362 0.555
Operation1K	-0.01 -0.01	1.76 0.00	1.81 0.00	0.008 -0.204	-0.653 -0.013	-3.027 0.013
Operation2K	0.01 -0.01	1.76 0.00	1.81 0.00	0.038 -0.211	-0.644 0.027	-3.025 -0.053
Wind1-X	7.77 0.00	-0.01 0.03	0.00 0.00	1.907 -0.010	0.011 1.716	0.002 -0.378
Wind1-Y	0.00 -0.02	7.25 0.00	0.00 0.00	0.036 -0.247	0.751 0.017	-0.261 -0.039

Extreme value	-7.85 -0.03	9.01 -0.03	11.86 0.00	-3.214 2.200	-3.229 -1.989	-3.288 1.364
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	Projekt :	ASU No. 9, Kosice	Seite 63 von 198
			Ber. Nr.: KO 01/02

Line 1 Point 57 -v N15001 ST. N2, DN600
Spec. coordinate system : KS_0
Xs= 0.000 1.000 0.000 Ys= -1.000 0.000 0.000 Zs= 0.000 0.000 1.000

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
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Weight	0.02	-0.02	-0.03	0.488	0.228	-2.522
	0.02	0.00	0.01	1.080	0.274	0.266

Operation1H	0.14	-1.16	1.71	14.196	4.316	-3.373
	0.02	-0.01	0.21	1.136	-18.956	7.401

Operation2H	0.01	-1.28	1.69	2.451	2.876	-3.517
	0.07	0.00	0.01	3.149	-2.878	0.456

Operation6	0.14	-1.18	1.70	15.063	5.704	-2.545
	0.02	-0.01	0.22	0.702	-19.901	7.915

Operation1K	0.01	0.12	0.12	-1.719	-1.941	-2.731
	0.01	0.00	-0.01	0.590	3.178	-0.554

Operation2K	0.01	0.12	0.11	-1.514	-1.777	-2.975
	0.01	0.00	-0.01	0.724	2.784	-0.549

Wind1-X	0.00	-0.65	-0.19	-0.213	-1.427	0.671
	-0.01	0.00	0.00	-1.775	0.437	0.117

Wind1-Y	0.64	0.01	0.00	1.290	0.296	0.157
	-0.01	0.02	0.01	-0.238	-1.207	0.492

Extreme value	0.78	-1.93	1.90	16.353	7.131	-4.188
	0.08	-0.03	0.23	4.924	-21.108	8.407

	Projekt :	ASU No. 9, Kosice	Seite 64 von 198
			Ber. Nr.: KO 01/02

Line 2 Point 68 -v A15001 ST. N4, DN700
Absolute Coordinate System

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	0.00 0.00	0.00 0.00	-0.30 0.00	0.803 -0.154	-0.844 0.058	-7.930 -1.049
Operation1H	0.00 0.00	-6.03 0.05	1.20 0.00	-8.663 -0.095	0.722 1.929	5.279 -4.912
Operation2H	0.00 0.01	-0.23 0.01	-0.22 0.00	-0.158 0.293	2.070 0.353	-6.431 2.636
Operation6	0.00 0.00	-6.17 0.01	1.13 0.00	-6.067 -0.089	1.861 0.531	3.131 -2.027
Operation1K	0.00 0.00	0.56 -0.03	-0.49 0.00	3.984 -0.130	-1.957 -1.005	-11.428 -2.369
Operation2K	0.00 0.01	-0.23 0.01	-0.25 0.00	-0.313 0.531	1.634 0.208	-7.574 2.117
Wind1-X	0.00 0.00	0.00 -0.04	-0.09 0.00	4.471 0.135	-0.219 -1.468	-2.726 -0.442
Wind1-Y	0.00 0.02	0.00 0.00	0.01 0.00	-0.078 0.871	4.265 -0.113	0.411 4.583

Extreme value	0.00 0.03	-6.17 0.10	1.29 0.00	-13.134 1.402	6.335 3.397	-14.154 -9.496
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	Projekt :	ASU No. 9, Kosice	Seite 66 von 198
			Ber. Nr.: KO 01/02

Line 7 Point 122 -v N15001 ST. N1, DN600
 Spec. coordinate system : KS_0
 Xs= 0.000 1.000 0.000 Ys= -1.000 0.000 0.000 Zs= 0.000 0.000 1.000

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	0.01 0.00	-0.03 0.00	-0.01 0.00	0.018 0.041	-0.236 1.137	3.234 -0.104
Operation1H	0.05 -0.04	1.09 0.00	1.72 -0.01	-0.015 -1.897	-5.514 1.375	-0.651 -0.468
Operation2H	0.02 -0.04	0.88 0.00	1.75 -0.08	1.515 -2.035	-11.218 -4.196	-0.383 -3.013
Operation6	0.06 -0.04	0.91 0.00	1.73 -0.09	1.824 -1.974	-11.772 -4.220	-1.696 -3.358
Operation1K	0.02 0.00	0.07 0.00	0.11 0.00	0.492 -0.032	7.118 2.617	2.531 0.179
Operation2K	0.02 0.00	0.06 0.00	0.11 0.00	0.458 -0.044	6.545 2.986	2.332 0.187
Wind1-X	0.00 0.00	-0.65 0.00	0.19 0.00	0.050 -1.222	-1.385 -0.146	1.032 0.016
Wind1-Y	0.64 0.00	0.00 0.02	0.00 -0.02	1.730 0.003	-0.077 0.147	-0.464 -0.572

Extreme value	0.70 -0.04	1.74 0.02	1.94 -0.11	3.555 -3.258	-13.158 -4.367	4.266 -3.930
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	Projekt :	ASU No. 9, Kosice	Seite 68 von 198
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Line 8 Point 136 n A15002 ST. N3, DN700
Absolute Coordinate System

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	0.00 0.02	0.00 0.01	-0.07 0.00	-2.178 0.706	0.211 0.190	-1.221 1.901
Operation1H	0.00 -0.02	-0.23 -0.04	0.53 0.00	5.296 -1.085	-10.431 -1.544	5.965 -20.901
Operation2H	0.00 -0.08	-6.02 0.01	10.54 0.00	-7.884 -3.113	5.747 0.300	-12.437 11.748
Operation6	0.00 0.01	-6.17 -0.06	10.34 0.00	-5.740 0.376	8.843 -2.162	-18.177 -6.437
Operation1K	0.00 0.00	-0.22 0.00	0.22 0.00	-3.641 0.100	5.191 0.037	-3.845 6.580
Operation2K	0.00 0.02	0.56 0.00	-0.54 0.00	-1.880 0.793	2.234 0.026	-1.916 5.162
Wind1-X	0.00 -0.01	0.00 0.04	0.08 0.00	2.509 -0.590	-1.359 1.261	2.314 20.044
Wind1-Y	0.00 -0.01	0.00 -0.01	-0.11 0.00	0.256 -0.554	7.510 -0.203	-3.330 -3.901

Extreme value	0.00 -0.09	-6.17 -0.10	10.65 0.00	-10.393 -3.703	-17.942 -3.422	-21.507 -40.945
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	Projekt :	ASU No. 9, Kosice	Seite 71 von 198
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Line 20 Point 421 n F15031 ST. N2, DN700
Absolute Coordinate System

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	0.00 0.00	0.01 0.00	-0.02 0.00	-0.220 2.350	-0.193 0.024	-10.851 -0.269
Operation1H	-0.01 -0.01	-0.52 0.00	0.13 0.00	-4.670 -23.620	4.981 -5.397	-7.115 -6.274
Operation2H	0.01 -0.01	-0.52 0.00	0.13 0.00	4.882 -22.712	5.020 6.341	-7.800 6.555
Operation6	0.00 -0.01	-1.99 0.00	0.48 0.00	-0.541 -18.830	5.132 0.160	-1.058 -0.310
Operation1K	0.00 0.00	-0.52 0.00	0.10 0.00	-0.376 0.006	4.603 0.851	-10.205 -0.293
Operation2K	0.00 0.00	-0.52 0.00	0.10 0.00	0.398 0.029	4.610 -0.659	-10.256 0.357
Wind1-X	0.03 0.00	0.00 0.00	0.00 0.00	10.720 -0.022	0.001 -0.726	-0.001 11.986
Wind1-Y	0.00 0.00	0.01 0.00	0.00 0.00	0.063 -2.412	1.690 -0.007	-0.162 0.078

Extreme value	-0.04 -0.01	-2.00 0.00	0.48 0.01	15.602 -26.032	6.822 7.068	-11.013 18.541
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	Projekt :	ASU No. 9, Kosice	Seite 72 von 198
			Ber. Nr.: KO 01/02

Line 22 Point 293 -n W15001 FL. N4, DN600
Absolute Coordinate System

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	-0.07 0.00	-0.09 0.00	-0.01 0.00	-0.309 1.729	-0.152 -0.569	0.342 -0.119
Operation1H	0.60 0.00	-0.38 0.04	3.49 -0.02	-20.504 0.624	2.436 10.228	0.939 -4.874
Operation2H	0.12 0.01	-0.95 0.04	3.50 0.01	-22.188 6.540	0.654 10.192	0.167 0.159
Operation6	0.78 0.02	-1.47 0.05	3.34 0.01	-15.121 13.839	0.506 6.918	-3.672 -5.689
Operation1K	-0.21 0.00	-0.21 0.00	0.07 0.00	-4.321 3.982	0.419 -0.549	-0.645 -0.545
Operation2K	-0.21 0.00	-0.19 0.00	0.07 0.00	-4.590 3.807	0.541 -0.534	-0.603 -0.670
Wind1-X	1.15 0.00	-0.01 0.00	-0.03 0.00	1.803 -0.883	0.011 -0.554	-0.069 0.215
Wind1-Y	0.05 0.00	0.38 0.00	-0.03 -0.01	-0.061 -3.612	-0.320 -0.943	-2.318 -0.658

Extreme value	1.93 0.02	-1.86 0.05	3.53 -0.02	-23.991 17.450	2.757 11.171	-5.990 -6.346
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	Projekt :	ASU No. 9, Kosice	Seite 76 von 198
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Line 22 Point 385 -v COLD-BOX ST. N2, DN700
Absolute Coordinate System

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	-0.58 0.00	0.00 0.02	-0.08 0.03	0.000 0.000	0.000 0.000	0.612 0.000
Operation1H	-0.58 -0.01	0.26 0.01	-0.28 0.03	0.000 0.000	0.000 0.000	0.612 0.000
Operation2H	-0.58 -0.01	0.26 0.01	-0.28 0.03	0.000 0.000	0.000 0.000	0.612 0.000
Operation6	-1.29 -0.03	0.65 0.04	-0.76 0.06	0.000 0.000	0.000 0.000	0.612 0.000
Operation1K	-0.58 -0.01	0.26 0.01	-0.28 0.03	0.000 0.000	0.000 0.000	0.612 0.000
Operation2K	-0.58 -0.01	0.26 0.01	-0.28 0.03	0.000 0.000	0.000 0.000	0.612 0.000
Wind1-X	-1.19 -0.01	0.00 0.04	-0.17 0.05	0.000 0.000	0.000 0.000	0.000 0.000
Wind1-Y	0.01 0.00	0.00 0.00	0.04 0.00	0.000 0.000	0.000 0.000	0.000 0.000

Extreme value	-2.47 -0.04	0.65 0.08	-0.93 0.11	0.000 0.000	0.000 0.000	0.612 0.000
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	Projekt :	ASU No. 9, Kosice	Seite 78 von 198
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Line 49 Point 473 v N16007 ST. , DN500
Absolute Coordinate System

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	0.00 0.00	0.00 0.00	-0.01 0.00	-0.001 0.063	0.000 -2.184	-3.208 0.000
Operation1H	-0.08 0.00	0.00 0.00	0.16 0.00	1.083 0.015	0.271 -6.111	-3.960 -1.451
Operation2H	-0.08 0.00	0.00 0.00	0.16 0.00	1.083 0.015	0.271 -6.111	-3.960 -1.451
Operation6	-0.34 0.00	0.01 0.02	0.74 0.00	0.680 0.197	0.994 -17.295	-6.000 -5.139
Operation1K	-0.08 0.00	0.00 0.00	0.16 0.00	1.083 0.015	0.271 -6.111	-3.960 -1.451
Operation2K	-0.08 0.00	0.00 0.00	0.16 0.00	1.083 0.015	0.271 -6.111	-3.960 -1.451
Wind1-X	0.01 0.00	0.00 0.00	0.01 0.00	0.499 -0.003	0.040 -0.313	-0.059 -0.128
Wind1-Y	0.00 0.00	0.01 0.00	0.01 0.00	-0.071 -0.002	1.006 -0.225	-0.042 -1.282

Extreme value	-0.34 0.00	0.02 0.02	0.75 0.00	1.582 0.201	2.000 -17.608	-6.059 -6.421

	Projekt :	ASU No. 9, Kosice	Seite 79 von 198
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Line 49 Point 479 -n AIR COMPRESSOR ST. 1.01
Spec. coordinate system : KS_1
Xs= 1.000 0.000 0.000 Ys= -0.000 0.000 1.000 Zs= 0.000 -1.000 0.000

LoadCase	WX PX mm Grd	WY PY mm Grd	WZ PZ mm Grd	QX MX kN kNm	QY MY kN kNm	QZ MZ kN kNm
Weight	0.00 0.00	-0.01 0.00	0.00 0.00	0.001 -0.019	-1.492 -0.003	0.000 0.249
Operation1H	-0.87 0.00	0.00 0.00	0.31 0.00	0.410 0.047	-1.203 0.028	0.417 0.199
Operation2H	-0.87 0.00	0.00 0.00	0.31 0.00	0.410 0.047	-1.203 0.028	0.417 0.199
Operation6	-3.66 0.00	-0.01 0.02	1.52 0.00	0.315 0.270	-0.899 0.025	0.907 0.538
Operation1K	-0.87 0.00	0.00 0.00	0.31 0.00	0.410 0.047	-1.203 0.028	0.417 0.199
Operation2K	-0.87 0.00	0.00 0.00	0.31 0.00	0.410 0.047	-1.203 0.028	0.417 0.199
Wind1-X	0.00 0.00	0.00 0.00	0.00 0.00	0.496 0.004	0.019 -0.111	0.040 -0.003
Wind1-Y	0.00 0.00	0.00 0.00	-0.02 0.00	0.071 0.003	0.014 -0.353	-0.820 -0.002

Extreme value	-3.66 0.00	-0.01 0.02	1.55 0.00	0.906 0.275	-1.511 0.381	1.727 0.541
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