

MSA Dolní Beněšov, Hlučínska 41 Tel: 00420-563-541111 Fax: 00420-563-51236 E-mail: sales@msa.cz				Inspection Certificate according to DIN EN 10204 3.1 B P3 402/VI/2003				TPHU 412141-2 Date: 24.06.03		 Ing. Drobik Quality Manager, Msa, a.s.		MSA, a.s. DOLNÍ BENEŠOV odbor kvality 1					
Customer: Zy-Tech Global Industries, Inc.		Projekt:		Terms of delivery:		API 598,600,NACE MR 01-75		We hereby certify that the items listed below are satisfactory in accordance with the requirements of valve standard and purchase order.									
Order: 22-6034		Order(customer): 5000 OB		Allow work pressure:		ANSI 300 WOG 100°F 740 PSI		EC DECLARATION OF CONFORMITY MSA DOLNÍ BENEŠOV, Hlučínská 41, CZECH REPUBLIC									
ITEM: 0090		Code: 220 483 6034		Allow work temperatur:		800°F		According to annex VII of 97/23/EC directive, hereby declare that the products detailed below are in compliance with the directive 97/23/EC and have been manufactured in accordance with conformity assesment module B+C1, as approved by Strojirensky zkusebni ustav (CODE 1015) of Brno, Czech republic									
								Category: III		Fluid group: II							
Product Gate valve		Seríál nr. D032084		PVP 001		Pieces 35		DN 2.5		PN 300		Type C 09.2 202 5300/23 LUF-N		Material A 216 WCB		SP 3	
API DIN		Function test AG AQ		Shell test BA		Backseat BP		Seat test-water BN		Seat test-air BO		Additional tests BE,BF		Test date		Passed	
Work No. arm.		Z-O Mpa		Mpa min		Mpa min		Mpa min		Mpa min		Mpa min		Date		Inspector's mark	
		2		7.9 1		5.7 1		5.7 2		0.6 2							
		Result Operator		Result Operator		Result Operator		Result Operator		Result Operator		Result Operator					
1		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
2		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
3		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
4		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
5		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
6		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
7		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
8		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
9		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
10		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
11		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
12		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
13		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
14		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
15		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
16		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
17		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
18		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
19		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
20		GOOD 039		GOOD 039		GOOD 039		GOOD 039		GOOD 039				21.05.03		B 24	
21		GOOD 375		GOOD 375		GOOD 375		GOOD 375		GOOD 375				23.05.03		B 24	
22		GOOD 375		GOOD 375		GOOD 375		GOOD 375		GOOD 375				23.05.03		B 24	
23		GOOD 375		GOOD 375		GOOD 375		GOOD 375		GOOD 375				23.05.03		B 24	
24		GOOD 375		GOOD 375		GOOD 375		GOOD 375		GOOD 375				23.05.03		B 24	
25		GOOD 375		GOOD 375		GOOD 375		GOOD 375		GOOD 375				23.05.03		B 24	
26		GOOD 375		GOOD 375		GOOD 375		GOOD 375		GOOD 375				23.05.03		B 24	
27		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
28		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
29		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
30		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
31		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
32		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
33		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
34		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
35		GOOD 373		GOOD 373		GOOD 373		GOOD 373		GOOD 373				23.05.03		B 24	
Other tests:		Hardness of:		Stem nut 139-202 HB backseat bushing min. 140-174 HB. Basic material of the seat 130-150 HB								Note:					

Work No. arm.	Body			Bonnet			Wedge			Stem		Socket		Seat	Control
	pattern		material	pattern		material	pattern		material	pattern	material	material		material	EM type
	4132-209		A 216 WCB	6714-064		A 216 WCB	3817-295		A 182 F 316		3536-389	A 182 F 316			
	piece No.	heat	certificate	piece No.	heat	certificate	piece No.	heat	certificate	heat	certificate	heat	forging	heat	Manuf. No.
1 47	RX8	RS030325	32	SN4	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
2 41	RX7	RS030325	46	SN4	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
3 56	RX8	RS030325	119	SN7	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
4 71	RX9	RS030325	21	SN4	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
5 89	RY1	RS030325	44	SN4	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
6 32	RX7	RS030325	109	SN7	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
7 97	RY4	RS030352	99	SN6	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
8 4	RX6	RS030319	47	SN4	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
9 19	RX7	RS030325	57	SN5	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
10 99	RY4	RS030352	101	SN6	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
11 100	RY4	RS030352	112	SN7	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
12 30	RX7	RS030325	94	SN6	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
13 63	RX9	RS030325	74	SN5	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
14 95	RY4	RS030352	1	SN3	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
15 12	SR1	RS030319	55	SN5	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
16 9	RX6	RS030319	100	SN6	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
17 102	RY4	RS030352	2	SN3	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
18 10	SR1	RS030319	19	SN4	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
19 62	RX9	RS030325	110	SN7	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
20 24	RX7	RS030325	75	SN5	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
21 52	RX8	RS030325	92	SN6	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
22 34	RX7	RS030325	107	SN7	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
23 64	RX9	RS030325	79	SN6	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
24 81	RX9	RS030325	103	SN7	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
25 93	RY1	RS030325	115	SN7	RS030300	--	F	11/03	103	98/2002	--	--	--	--	
26 55	RX8	RS030325	49	SN5	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
27 106	BT8	RS012216	105	SN7	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
28 83	RX9	RS030325	23	SN4	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
29 28	RX7	RS030325	93	SN6	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
30 31	RX7	RS030325	38	SN4	RS030266	--	F	11/03	103	98/2002	--	--	--	--	
31 78	RX9	RS030325	95	SN6	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
32 2	RV9	RS030861	90	SN6	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
33 87	RY1	RS030325	108	SN7	RS030300	--	F	11/03	111	154/2003/A	--	--	--	--	
34 57	RX9	RS030325	42	SN4	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	
35 36	RX7	RS030325	40	SN4	RS030266	--	F	11/03	111	154/2003/A	--	--	--	--	

Heat	Chemical analysis											Tension					Impact				
	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	V %	W %	Ceq	Rp 0.2 MPa	Rm MPa	A %	Z %	HB	1 J	2 J	3 J	X J
172422/111	0.026	1.80	0.45	0.026	0.026	--	--	16.32	2.02	--	--	--	302	611	53.6	77.9	156	--	--	--	--
272882/F	0.025	1.38	0.43	0.026	0.024	--	--	16.60	2.00	--	--	--	267	573	53	74	--	--	--	--	--
77437/103	0.04	1.02	0.38	0.031	0.009	--	--	17.31	2.23	--	--	--	266	557	54	70.8	143-153	--	--	--	--
0.20	1.05	0.41	0.018	0.017	0.11	0.03	0.09	0.01	0.015	--	0.41	281	506	30.5	51.9	158	65	74	67	68.6	
RV9	0.20	1.05	0.43	0.016	0.010	0.05	0.04	0.10	0.00	0.005	--	0.41	300	516	34.7	59.1	162	67	85	70	74
RX6	0.20	1.01	0.42	0.017	0.014	0.05	0.04	0.03	0.00	0.004	--	0.38	286	522	31.4	58.2	164	86	101	79	88.6
RX7	0.20	1.01	0.41	0.016	0.012	0.04	0.03	0.03	0.00	0.004	--	0.38	301	507	33.6	59.4	162	101	100	86	95.6
RX8	0.19	1.13	0.37	0.016	0.013	0.04	0.03	0.02	0.00	0.004	--	0.39	288	507	34.3	60.3	162	93	93	103	96.3
RX9	0.21	1.01	0.43	0.016	0.012	0.04	0.04	0.04	0.00	0.004	--	0.39	300	519	33	51.5	164	70	76	75	73.6
RY1	0.20	0.98	0.40	0.017	0.012	0.04	0.03	0.03	0.00	0.004	--	0.38	280	505	31.6	58.7	162	76	95	69	80
RY4	0.21	1.02	0.40	0.018	0.013	0.04	0.03	0.03	0.00	0.004	--	0.39	313	519	30	49.4	164	102	90	94	95.3
SN3	0.21	1.01	0.44	0.018	0.013	0.05	0.04	0.03	0.00	0.004	--	0.39	321	530	31	51.6	168	95	78	92	95
SN4	0.22	1.03	0.45	0.018	0.010	0.04	0.03	0.03	0.00	0.004	--	0.40	299	526	29.6	56.7	168	67	89	71	67
SN5	0.23	0.67	0.39	0.015	0.011	0.05	0.03	0.03	0.00	0.004	--	0.35	282	500	32.6	51.9	160	52	52	52	52
SN6	0.22	1.04	0.42	0.018	0.014	0.05	0.04	0.03	0.00	0.004	--	0.41	296	522	31	54.8	166	83	73	76	83
SN7	0.20	1.03	0.40	0.017	0.013	0.04	0.03	0.03	0.00	0.004	--	0.38	308	517	29.1	48.2	164	83	75	87	83
SR1	0.20	1.03	0.37	0.017	0.013	0.05	0.04	0.03	0.00	0.004	--	0.38	277	503	34.5	56.6	160	80	100	78	86