UNIMECH (SHANGHAI) CO.,LTD.

MATERIAL TEST CERTIFICATE Acc. EN10204-2004 3.1

Cert No: C2156-16

Product description	Qty	Item	Tag No	Pressure test				Acc. API 598-2016				Valve serial No
				Back seal (Hyd)		Shell test (Hyd)		Seal test (Hyd)		Seal test (air)		
GLOBE VALVE 1 1/2" 800LB ,SW BODY BONNET A105N / DISC A276 420 / STEM A276 410 / SEAT INT+13Cr Design API 602	35	16	/	15.2MPa	15S	21.0MPa	15S	15.2MPa	15S	0.6MPa	15S	C2156781~815

Heat No.	10Part Name	Material	CHEMICAL COMPOSITION												MECHANICAL PROPERTY				Impact test Temp:			Hardness
			C	Si	Mn	P	S	Cr	Ni	Mo	Cu	N			Tensile (MPa)	Yield (MPa)	E(%)	R(%)	V1	V2	V3	
D41	Body	A105N	0.180	0.280	0.690	0.018	0.019	0.050	0.070	0.050	0.020	0.001			518	276	30	41	/	/	/	166
D39	Body	A105N	0.220	0.310	0.840	0.025	0.022	0.063	0.068	0.058	0.066	0.001			525	280	32	43	/	/	/	156
D31	Body	A105N	0.198	0.231	0.655	0.022	0.019	0.062	0.036	0.011	0.042	0.001			525	285	29	47	/	/	/	153
D39	Bonnet	A105N	0.220	0.310	0.840	0.025	0.022	0.063	0.068	0.058	0.066	0.001			525	280	32	43	/	/	/	156
D31	Bonnet	A105N	0.198	0.231	0.655	0.022	0.019	0.062	0.036	0.011	0.042	0.001			525	285	29	47	/	/	/	153
420035	Disc	420	0.177	0.803	0.778	0.026	0.029	13.067	/	/	/	/			/	/	/	/	/	/	/	219
410-Z01	Stem	410	0.118	0.606	0.958	0.022	0.025	12.788	/	/	/	/			728	560	21	57	/	/	/	230
4T781	Seat	410	0.145	0.652	0.699	0.020	0.028	12.723	/	/	/	/			712	598	21	53	/	/	/	211

Material	Method	Temp. ℃	Duration	Cooling Method	Furnace type
A105N	Normalized	920	3h	air	Electric
A276 420	Quenched+Tempered	1000+600	3h	air	Electric
A276 410	Quenched+Tempered	960+600	3h	air	Electric

Dimension	ACCEPTED
Marking	ACCEPTED
Operation	ACCEPTED
Painting	N/A
Surface	ACCEPTED

Remarks :

We hereby certify that the valve listed above are manufactured and tested in accordance with the requirements of valve standard and purchase order.

UNIMECH (SHANGHAI) CO.,LTD. 联马机械贸易(上海)有限公司

(Checked by)	He Shengliang	Date	2021.12.24	Quality Dept.	