GUJARAT GAS

DATASHEET FOR
BALL VALVE 2" & 3"

Document No.: GGL/TS/DS/BV-2"&3"/002,REV-00

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Sr. No.	Description	Specification
GENERAL		
1	Valve Size	2" -3"
2	ANSI Rating	ANSI 150#/300#/600#
3	Design Standard	API 6D
4	Corrosion allowance	1.5 mm
5	Design Factor	0.4
SERVICE CONDITIONS		
6	Service	Natural Gas
7	Design Pressure	19 Bar-g /49 Bar-g/98 Bar-g
8	Design temp.	1. 150# : 0 to 65°C 2. 300# & 600# : -10 to 65°C
9	Operating Pressure(Maximum)	19 Bar-g /42 Bar-g/90 Bar-g
10	Operating temp.	1. 150# : 0 to 50°C 2. 300# & 600# : -10 to 50°C
VALVE CONSTRUCTION DESIGN		
11	Location	Above Ground/Under Ground
12	Valve Type	For 150# / 300# - Floating For 600# - Trunion Mounted
13	Bore(Full/Reduced)	Full Bore
14	End Connections	1. Flange End (as per ASME B 16.5) 2. Butt Welded (as per ASME B 16.25)
15	PUPS Length - applicable for Butt weld ends	Length - 150 mm (Min.)
16	Locking Device	Locking facility in full open position
17	Shutoff Class	VI
18	Construction	Two/Three Piece construction required
19	Bi- Directional	Required
20	Double Block and Bleed	Applicable only for 600#
21	Blow out proof stem	Required
22	Anti-static device	Required
23	Lever operation	Required
24	Open and close Ball position indicator	Required
VALVE MATERIAL SPECIFICATION		
	Part	**Specified Material**
25	Body	1. For 150# - ASTM A 216 Gr. WCB (Investment Casting) 2. For 300#/600# - ASTM A 352 Gr. LCB / LCC,ASTM A 350 Gr. LF2
26	Ball (SOLID)	ASTM A 479 SS316/ASTM A351 CF8M + 80 micron ENP
27	Primary seat	ASTM A 479 Grade SS316/ASTM A351 Grade CF8M
28	Seat insert	RPTFE
29	Stem (ANTI BLOW OUT)	ASTM A 479 SS316 (NO CASTING)

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30	Stem seals (Renewable with valve open on Stream)		As per manufacturer recommendation
31	PUPS-Applicable for Butt welded ends		1. MOC for 150 # : ASTM A 106 Gr. B (Charpy test at 0 deg C) or ASTM A 333 Gr. 6 for 2" Sch 80 and Sch. 40 for 3" 2. MOC for 300# & 600# - ASTM A 333 Gr.6 for 2" Sch 80 and Sch. 40 for 3" 3. The carbon content is greater than 0.12% in product analysis, the CE (IIW) shall not exceed 0.40% and if The carbon content is less than 0.12% in product analysis, the CE (Pcm) shall not exceed 0.20%.
32	Stud bolts / Nuts		1. For 150# - ASTM A 193 Gr. B7 / A194 Gr. 2H, Hot Dipped Galvanized as per ASTM A 153 2. FOR 300#- STUD:ASTM A 320 Gr.L7 NUT: ASTM A 194 Gr.7 , Hot Dipped Galvanized as per ASTM A 153
33	Anti static device		ASTM A 479 Gr. SS 302
34	Gland Packing		GRAFOIL
35	Body Gasket		GRAFOIL
36	Gear Box		Not Applicable
37	Drain Valve & Size		½" NB, SS 316 800#
38	Vent Valve & Size		½" NB, SS 316 800#
39	Globe / Needle Valve & Size		
40	Seat Sealant Injector		Not Applicable
41	Stem Sealant Injector		Not Applicable
42	Gear Box		Not Applicable
VALVE TESTING REQUIREMENT			
43	Fire Resistant Design Requirement		As per API 6FA/API 607 / BS : 6755 (Part - II) / BS EN ISO 10497/API-RP-6FA
44	Hydrostatic Test	Body	1.5 X Design Pressure
		Seat	1.1X Design Pressure
45	Air Seat Test		7 Bar-g
46	Anti Static Testing Requirement		Direct current <12V and resistance on dry valves shall not exceed 10 Ohms
47	Charpy Impact Test		Body & side pieces, Pipe pup, vent drain pipe, Ball & seat, Stem and all pressure containing part as per the MOC standard In case Charpy test value not specified in relevant codes and standards than charpy shall be carried out at 0 °C and absorbed energy value shall be average 35 j and minimum 28 j respectively.
48	Hardness test		As per Material of construction standard
49	NDE Test		Refer Note 10
50	Operational Torque Test		Shall not exceed 360 N
51	Marking & Painting Spec.		SSPC-SP/MSS SP-25 & API 6D and GGL Specification

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NOTE:-
1. Inspection and Testing shall be as per this Data Sheet, GGL Specification, API 6D & API 598. Inspection shall be carried out by TPI at Manufacture's work as per QAP approved by GGL
2. Vendor to submit GA drawing and QAP for approval prior to commencement of manufacturing
3. Short pattern valves are not acceptable.
4. Valves shall be lever operated.
5. Test Certificates shall be reviewed by client/TPIA as per approved QAP, GA drawing, Inspection & Test certificates including NDE. Manufacture to submit standard weight and operation Torque.
6. Bidder shall clearly mention deviation, if any.
7. In case valve is supplied in accordance with API 6D, Min. body valve thickness shall be as per ASME B16.34
8. 100% of valve shall undergo hydro test of seat, soft seat shall be replaced after hydro test. After that all valves shall be air tested.
9. 100% valves castings shall be subjected to radiography test.

Note 10: Non Destructive Examination

- Body castings of all valves shall be 100% radio graphically examined as per ASME B16.34. Procedure and acceptance criteria shall be as per ASME B 16.34. For all sizes, body casting shall be subjected to 100% radiography.
- All forgings shall be ultrasonically examined in accordance with the procedure and acceptance standard of Annexure E of ASME B 16.34.
- Full inspection by radiography shall be carried out on all welds of pressure containing parts. Acceptance criteria shall be as per ASME B 31.3 or ASME B31.8 as applicable and API 1104.
- All finished weld ends subject to welding in field shall be 100% ultrasonically tested for lamination type defects for a distance of 50 mm from the end. Laminations shall not be acceptable.
- Weld ends of all cast valves subject to welding in field shall be 100% radio graphically examined and acceptance criteria shall be as per ASME B16.34.
- After final machining, all bevel surfaces shall be inspected by dye penetrate or wet - magnetic particle methods. All defects longer than 6.35 mm shall be rejected. Reject able defects must be removed. Weld repair of bevel surface is not permitted.

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