

**TECHNICAL SPECIFICATION
FOR CRYOGENIC BALL VALVES**

REF.NO.	BVTS0018		00 REV.NO.
DATE	25. APR. 2008		
SHEET	01	OF	02



1. PRODUCT : BALL VALVE (FLOATING & TRUNNION)
2. PRESSURE RATING : CLASS 150, 300 & 600
3. STANDARDS
- DESIGN : BS EN ISO 17292 (BS 5351) / API-6D
- TESTING : BS 6364 - 1984

4. MATERIALS

<u>SHELL</u>	<u>TRIM</u>	<u>SEAMLESS PIPE (Sch -160)</u>	<u>SERVICE TEMPERATURE (°C)</u>
LCB	CF8 / 304	ASTM A352 Gr.LCB	-46
CF8	CF8 / 304	ASTM A351 Gr.CF8	-196
CF8M	CF8M / 316	ASTM A351 Gr.CF8M	-196

<u>SHELL</u>	<u>PACKING</u>	<u>GASKET</u>	<u>FASTNERS (IMPACT TESTED)</u>
LCB	GRAPHITE	SPW 304 + GRAPHITE	ASTM A320 Gr.L7 / A194 Gr.7
CF8	GRAPHITE	SPW 304 + GRAPHITE	ASTM A320 Gr.B8-CL 2 / A194 Gr.8
CF8M	GRAPHITE	SPW 316 + GRAPHITE	ASTM A320 Gr.B8M-CL 2 / A194 Gr.8M

NOTE : B8 / B8M STUDS ARE STRAIN HARDENED

5. PRECAUTIONS TO BE TAKEN DURING MACHINING STAGE.

- SS CASTINGS SHOULD BE ACID PICKLED BEFORE MACHINING.
- CASTINGS SHOULD BE CLEANED WITH SOAP SOLUTION.
- DP CHECK TO BE CARRIED OUT FOR BALL.
- STEM CONCENTRICITY TO BE CHECKED AND RECORDED.

6. PRECAUTIONS TO BE TAKEN DURING ASSEMBLY STAGE.

- CHECK FOR BURRS AND SHARP EDGES IF ANY AND IF FOUND , REMOVE BY POLISH PAPER - 600E4.
- LAPPING OF BALL SHOULD BE CARRIED OUT CAREFULLY.
- BODY AND END PIECE SHOULD BE CLEANED WITH CLEANING SOLVENT OR SOAP SOLUTION & WITH N2 GAS.
- DRY ALL WETTED PARTS.
- ASSEMBLE THE VALVE CAREFULLY IN A CLEAN AND DUST-AND GREASE - FREE ENVIRONMENT.
- CARRY OUT SHELL TEST WITH N2 GAS BY PARTLY OPENING THE VALVE AT RATED SEAT PRESSURE.
CHECK FOR VISIBLE LEAKAGE WITH SOAP SOLUTION. NO VISIBLE LEAKAGE ALLOWED BETWEEN BODY / END PIECE
JOINT GASKET, THROUGH THE PACKING AND SHELL FOR A TEST DURATION OF 15 MINUTES MINIMUM.

PREPARED BY :

APPROVED BY :

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- CLOSE THE VALVE WITH TORQUE WRENCH AT RATED TORQUE VALUES.
- CARRY OUT THE PRESSURE TEST AT THE RATED PRESSURE WITH N2 GAS AND CHECK FOR SEAT LEAK FOR 15 MINUTES. NO VISIBLE LEAKAGE IS ALLOWED.
- OPEN AND CLOSE THE VALVE 20 TIMES.
- REPEAT THE SEAT PRESSURE TEST 3 TIMES TO GET CONSISTENT PERFORMANCE OF SEAT TEST WITH N2 GAS.
- CARRY OUT THE SEAT PRESSURE TEST & SHELL PRESSURE TEST WITH HELIUM GAS AT AMBIENT TEMPERATURE AT SEAT RATED PRESSURE.



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