

VENDOR CHECKLIST FOR CONTROL VALVE (BUTTERFLY VALVE TYPE)

BHEL Material Code:L143014220009001

TAG NO. COG41

TOS:TSK:003COGMCV/Rev.01

Enquiry No.

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(COG MAIN FLOW CONTROL VALVE)

	DESCRIPTION	BHEL REQUIREMENT	VENDOR CONFIRMATION
1.0	Flow Parameters		
1.1	Service	Coke oven gas flow control (Main FCV)	
1.2a	Flow @ Min./ Max	2300/46000 Ncu.m/Hr	
1.2b	Inlet Pressure @ Min./Max Flow	900/900 mm wc	
1.2c	Outlet Pressure @ Min./Max Flow	350/800 mm wc	
1.3	Actuator sizing DP mm wc	2000 mm wc	
1.4	Gas temp. Min/Nor./Max	3 / 27 / 50 deg.C	
1.5	Specific gravity	0.449	
1.6	Maximum line temperature	50 deg.C	
1.7	CV Reqd. @ Min./Max Flow	Vendor to furnish for both conditions	
1.8	Valve CV @Min./Max. Flow	Vendor to furnish for both conditions	
1.9	Flap positions @ Min./Max. Flow	10 deg / 65 deg(Vendor to specify)	
2.0	Valve Details		
2.1	Valve Make and Model	Vendor to specify	
2.2	Line size ODXT (mmxmm)	Ø 1168X10t reduced to 914x8t. (Reducer under purchaser's scope). Vendor to offer end connection details.	
2.3	Valve body size	NB 900 mm	
2.4	Valve / Disc type	Double eccentric Butterfly, =% / Modified parabolic	
2.5	Ends	Flanged	
2.6	Body rating	PN 6 or higher	
2.7	Body material	Carbon steel (Cast/fabricated)	
2.8	Disc material	Carbon steel	
2.9	Seat Material	Stainless steel	
2.10	Stem Material	Stainless steel	
2.11	Seal Material	Metal seated seals with better seal life and easily replaceable	
2.12	Handwheel material	Cast steel	
2.13	Packing Materials	Vendor to specify	
2.14	Stem size	Vendor to specify	
2.15	Seat leakage class	As per API 598	
2.16	Leakage thro' glands	Zero	
2.17	Max. Valve torque	Vendor to specify	
2.18	Mating flange	To suit line and valve size	
2.19	Fasteners for flanges	ASTM A193 GR. B	
2.20	Non-asbestos gaskets	Non-Asbestos	
3.0	Actuator	Pneumatic piston, double acting/Rotary	
3.1	Make and Model	Vendor to specify	
3.2	Size and Volume	Vendor to specify	
3.3	Spring number/ Range	Vendor to specify	
3.4	Action	Air to Open / Close	

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3.5	Air Pr. Kg/sq.cm(g)	4	
3.6	Torque developed at 4 kg/sq.cm(g)	Vendor to specify	
3.7	Pressure port connection	Vendor to specify	
3.8	Action on air failure	Stayput	
3.9	Air lock up valve	Vendor to offer	
4.0	Positioner model	Smart positioner as per CI 8.1	
4.1	Cam style	Characterised	
4.2	Action	Direct / Reverse - Field adjustable	
4.3	Gauges	Three numbers	
4.4	Signal pressure	4 to 20 mA	
4.5	Supply pressure	4 kg/sq.cm(g)	
4.6	Enclosure	NEMA 7 & 9	
4.7	Air set	Vendor to offer	
4.8	Air set End connection	1/2" NPT(F). Vendor to confirm.	
5.0	Position Transmitter	Inbuilt with Smart positioner	
6.0	Junction Box		
6.1	Enclosure	Explosion proof suitable for Zone-II, Gas group II-B, T2	
6.2	No. of terminals	24	
7.0	Applicable Standards		
7.1	Control valve sizing equations	ANSI / ISA S75.01	
7.2	Control valve capacity test procedure	ANSI / ISA S75.01	
7.3	Seat leakage	API 598	
7.4	Face to face dimensions	Vendor to specify.	
7.5	Flange dimensions & drilling	Vendor to specify.	
8.0	Special Requirements		
8.1	Smart positioner	As per annexure CI:TATA KALINGANAGAR:ECI:CV	
8.2	The line temperature may reach 50 deg.C at the time of steam/nitrogen purging.	Valve seal, seat materials shall withstand the temperature	
8.3	Mating flanges, Non- asbestos gaskets & Fasteners are in vendor's scope	Vendor to confirm	
8.4	Enclosures for all accessories shall be explosion proof suitable for COG area Class-I, Zone- II, Group- II B, T2 to the extent of IS- 5572.	Vendor to confirm	
		BHEL	VENDOR
	Prepared		
	Checked & Approved		