

Design and Development Validation & Final Approval

Design Package No.	2L-DP1920-C3
Package Start Date	08/06/2019

Valve Type	Butterfly Valve CAT-A (De-rated valve) at 1C Bar	Customer	2L Engineer
Size	DN 150 (NPS 6)	PO No. & Date	-
Class	ASME B16.34 Class 150	SL No. & Date	-
Design Standard	API 609, 8th Edition, Feb-2016, Errata April-2017	Type of Bore	-
Testing Standard	API 598, 10th Edition, Oct-2016	GAD No.	2L19-002(PRO)-S1 Rev-00
Face to Face Standard	API 609, 8th Edition, Feb-2016, Errata April-2017	Valve Serial No.	19BFVI 001P
End Connection Standard	Wafer to suit ASME B16.5 Class 150 -2017	Report No & Date	2L-DP1920-03 & 08/06/2019

CAST COMPONENTS

Components	Drawing No.	MOC	Heat No.	MTC	Inspection Report No.	MSS No	Remarks
Body	015001BFNWCWT201XXXI, Rev-00	ASTM A216 Gr WCB	A87324	10969 Dated: 16/09/19	2LQA02/19-20/11/P	MSS SP-55-2011 & MSS SP-25-2017	Acceptable
Wedge/ Disc / Ball	015001BFNWCWT210XXXS, Rev-00	ASTM A351 Gr CF8	A87316	10723 Dated: 12/09/19	2LQA02/19-20/3/P		Acceptable
Yoke / Stem	Round bar Ø25	ASTM A479 Type 304	103328	10007573258 DT:13/12/18	2LQA27/19-20/3/P		Acceptable

MACHINED COMPONENTS

Components	Drawing No.	MOC	Heat No.	MTC	Inspection Report No.	MSS No	Remarks
Body	015001BFNWCWT201XXXZS, Rev-00	ASTM A216 Gr WCB	A87324	10969 Dated: 16/09/19	2LQA03/2019/002/PRO/01/1	MSS SP-55-2011 & MSS SP-25-2017	Acceptable
Wedge/ Disc / Ball	015001BFNWCWT210XXXZS, Rev-00	ASTM A351 Gr CF8	A87316	10723 Dated: 12/09/19	2LQA03/2019/002/PRO/01/2		Acceptable
Upper Stem	015001BFNWCWT212XXXZB, Rev-00	ASTM A479 Type 304	103328	10007573258 DT:13/12/18	2LQA03/2019/002/PRO/01/3		Acceptable
Lower Stem	015001BFNWCWT213XXXZB, Rev-00	ASTM A479 Type 304	103328	10007573258 DT:13/12/18	2LQA03/2019/002/PRO/01/4		Acceptable
Sleeve	015001BFNWCWT215XXXZT, Rev-00	EPDM	00C1366688	TC/3535/2019 DT: 08/09/19	2LQA27/19-20/35/P		Acceptable
U Cup Seal	OD-25 x ID-19 x THK-5	Nitrile	TR NO: 1EHIT006	76 DT:15/10/2019	2LQA27/19-20/43/P		Acceptable

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Design Package No.	2L-DP1920-03
Package Start Date	08/06/2019

Valve Type	Butterfly Valve CAT-A (De-rated valve) at 10 Bar	Customer	2L Engineer
Size	DN 150 (NPS 6)	PO No. & Date	-
Class	ASME B16.34 Class 150	SL No. & Date	-
Design Standard	API 609, 8th Edition, Feb-2016, Errata April-2017	Type of Bore	-
Testing Standard	API 598, 10th Edition, Oct-2016	GAD No.	2L19-002(PRO)-S1 Rev-00
Face to Face Standard	API 609, 8th Edition, Feb-2016, Errata April-2017	Valve Serial No.	19BFVI 001P
End Connection Standard	Wafer to suit ASME B16.5 Class 150 -2017	Report No & Date	2L-DP1920-03 & 08/06/2019

REPORT OF NDT AND OTHER INSPECTION TESTING

TEST ACTIVITY	REPORT NUMBER AND DATE	Remarks
Impact Test Report *	-NR-	-
NDT (PT/RT/UT/MT) *	-NR-	-
Stem Wedge Pull Test Report *	-NR-	-
Fugitive Emission Test Report *	-NR-	-
Visual Inspection Report	2L-QA-04 19-20/002P-1 Dated: 19/10/2019	Acceptable
Assembly & Testing Report (QA)	2L-QA-04 19-20/002P-1 Dated: 19/10/2019	Acceptable
Antistatic Test *	2L-QA-28 19-20/002P-1 Dated: 19/10/2019	Acceptable
Any other Testing *	Torque Test : 2L-QA-20/19-20/002P-1 Dated: 19/10/2019	Acceptable
* If Applicable or Specify in QAP	-	-

ASSEMBLY DIMENSION REPORT (all dimensions are in mm, unless otherwise specified)

Parameter	Dimension		Remark	Parameter	Dimension		Remark
	Required	Actual			Required	Actual	
Face to Face	56 ±1.2	56	Acceptable	Stem Projection	NR	-	-
Outer Diameter	Ø214	Ø215.3	Acceptable	Wear Travel	NR	-	-
Inside Diameter	Ø148.4±1.5	Ø148.1	Acceptable	Junction Thickness	NR	-	-
Raise Face Diameter & Height	-	-	-	Lifting provision	Total valve Weight	NR	13 Kg (Approx) Acceptable
Raise Face Height	-	-	-		Customer requirement	-	-
Flange Thickness	-	-	-		NPS 3" and above	NR	-
PCD	Ø241.3	Ø241.3	Acceptable				

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Hole diameter	Ø22.2	Ø22.2	Acceptable	Antisatic Test (for Soft valve only)	Not greater than 10Ω at <12V	6Ω at <12V	Acceptable
No. of Holes	2	2	Acceptable	Tightening Torque	Body & Side Piece	-	-
Center to Top Height	295	295	Acceptable		Gland Bolt	-	-
(Open and Close)	NA	-	-	Valve Torque	Open (BTO)	122 Nm	72 Nm
Name Plate Marking	As per drawing	Not Available	NR at present		-	-	-
Handwheel Diameter	Ø110±5	Ø107.1	Acceptable		-	-	-
Shell Thickness	11	11	Acceptable	No of Turns (Gear box)		9	10

FINAL TESTING REPORT

Test Activity	HYDROSTATIC TESTING				LOW PRESSURE GAS SEAT TEST (COMPRESSED AIR)				Remarks / Observation
	Pressure Bar / Kg/cm ² / PSI		Test Duration (Minutes)		Pressure Bar / Kg/cm ² / PSI		Test Duration (Minutes)		
	Standard / Required	Actual	Standard / Required	Actual	Standard / Required	Actual	Standard / Required	Actual	
Shell	15	15	1	1	NR	-	-	-	No Leakage
Seat	11	11	1	1	3	6	1	1	No Leakage
Backseat	NR	-	-	-	NR	-	-	-	-
Cavity relief	NR	-	-	-	NR	-	-	-	-
Block and Bleed	NR	-	-	-	NR	-	-	-	-
Drain and Vent	NR	-	-	-	NR	-	-	-	-
Sealant line	NR	-	-	-	NR	-	-	-	-

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Abbreviation: HP - Horizontal Position. VP - Vertical Position, FET- Fugitive Emission Test

Remarks:

Prepared by: QC & Design Engineer

Test performed by : QC Manager

Verification by: Design Manager

Date: 22/10/19

FINAL APPROVAL, AFTER VALIDATION

After completion of All above validation, the complete Design Package verified / checked and finally approved as per API 6D / API 609

Design Approval after validation by: Operation Manager

Date 23/10/19

Format No. 2L-D&D-11 Rev.01 Dt. 01-03-2019