Project: **FIRE TEST FOR SOFT-SEATED BALL VALVE**

Certificate No.: ***M*297-1/09 - 9587**

Client: ***JC Fábricas de válvulas, S. A.***

Office: **Sant Joan Despí (BCN)**

Client's Order No.:: **---**

Date: **24.03.09**

Order Status: **Complete**

Inspection dates
First: **24.03.09**

Final: **24.03.09**

This certificate is issued to

Messrs. **JC Fábricas de válvulas, S. A.**, upon their request that the undersigned Suveryor to this Society did attend their premises at their works in Sant Boi de Llobregat - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in API 607 and ISO 10497, on the following type of valve:

A manually operate J.C Ball Valve TL series of 2" bore 2", as per fig 315 A.I.T, 150#
Body and Connector material A216 Gr.WCB
Trim: SEE DRAWING 090909

Marks:
- BODY : Col. AMV8
- CONNECTOR : Col. AJJ8

The test conducted on the valve previously subject to hydraulic pressure was as follows:

The valve in the closed position, filled with water under test pressure, was put in a box and exposed to flames with an environmental temperature in the region 750° C for a period of 30 minutes and established the leakage trough the seat and external to atmosphere during this period. The temperature was checked and recorded every two minutes, while leakages were determined using containers collecting the water leaked during burn period. Afterwards cool-down to 100° C. The valve seat and external hydrostatically tested to the appropiate test pressure and leakages recorded accordingly. Subsequently manually opened up under test pressure differential and finally the valve was fully hydrotested and leakages recorded.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report nº C297/09

1. Through-valve leakage during burn period - SATISFACTORY.
2. External leakage during burn and cool-down period - SATISFACTORY.
3. Through-valve leakage during operational test - SATISFACTORY.
4. External leakage during operational test - SATISFACTORY.
5. Operatibility to full open position and external leakage - SATISFACTORY.

The valve was subject to a visual examination with satisfactory results and subsequently dismantled in order to verify that valves components comply with the drawing and parts list supplied by the manufacturer, while seat rings were found completely destroyed.

The manufacturers Fire Safe Test Report nº C297/09 and drawing 090909 herewith attached were satisfactory checked and signed.

The above is considered in accordance with the mentioned specifications requirements, therefore the subject valve has satisfactory passed the prescribed fire test and can be also qualified as follows.

DN	CLASS RATING	PN RATING
50 and below, 65, 80 100	150#, 300#	10, 16, 25, 40

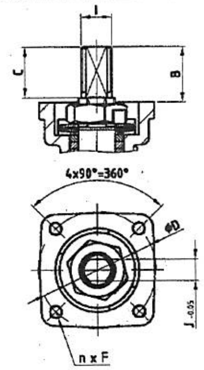
SGS Tecnos, S.A.
C/ Les Planes, 1 - Nave B
Polígono Industrial Fontsanta
08970 Sant Joan Despí (Barcelona)
Tel.: (34) 93 477 01 71 - 93 477 01 69
Fax: (34) 93 373 15 00

Surveyor Javier Aranda García

DOCUMENTS ATTACHED:
Sheets reviewed and stamped
Accordingly.

090909

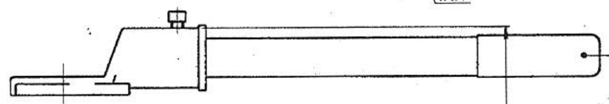
DN	L 150#/300#	ΦD 150#/300#	ΦP	A 150#/300#	M	H	h	N
1/2"	108 / 140	88,9 / 95	15	47 / 60	170	68	41	31
3/4"	117 / 152	98,5 / 117,5	20	50 / 65	170	70	43	33
1"	127 / 165	108 / 124	25	52 / 70	170	86	58,5	39
1½"	165 / 190	127 / 155,5	40	65 / 80	200	122,5	86,5	48
2"	178 / 216	152 / 165	50	61 / 83	200	127,5	91,5	63
2½"	190 / --	178 / --	65	75 / --	350	140	104	78
3"	203 / 283	191 / 210	78	78,5 / 118	450	190	118,5	87
4"	229 / 305	229 / 254	100	90 / 133	466	192,5	144	108
6"	394 / 403	279,5 / 318	151	174 / 160	775	259	203	152
8"	457 / 502	343 / 381	203	209 / 239	845	319	250	202

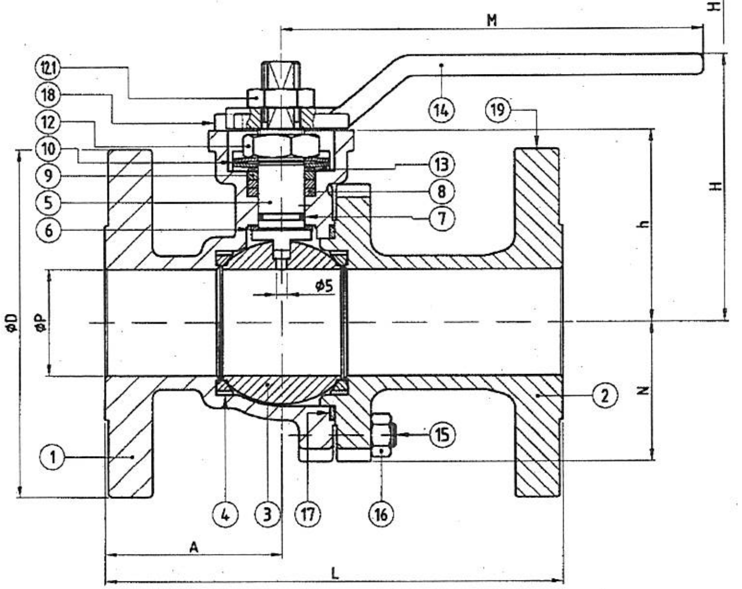


BALL VALVES STEM DIMENSIONS								WEIGHT (Kg.)	QUANTITY	ITEM
DN	ISO 5211	B	C	ΦD	n x F	I	J	150#/300#		
1/2"	F 05	17	11	50	4 x M6	M10	7	1,7 / 2,4	--	--
3/4"	F 05	18	11	50	4 x M6	M10	7	2,2 / 3,5	--	--
1"	F 05	22	21	50	4 x M6	M12	8	2,9 / 4,6	--	--
1½"	F 07	33	32	70	4 x M8	M18	12	6 / 9,2	--	--
2"	F 07	33	32	70	4 x M8	M18	12	8,5 / 11,5	--	--
2½"	F 07	34	33	70	4 x M8	M22	15	13,3 / --	--	--
3"	F 10	34	33	102	4 x M10	M22	15	18,5 / 25	--	--
4"	F 10	45	43,5	102	4 x M10	M28	19	29,3 / 39,5	--	--
6"	F 12	56	54,5	125	4 x M12	M36	24	64,5 / 88,1	--	--
8"	F 14	69	67	140	4 x M16	M48	32	123,2 / 160,5	--	--

NOTE 1

DN-1/2" ~ 1" : A 479 Tp.316
DN-1½" ~ 8" : A 351 Gr.CF8M





POS.	QUAN.	DENOMINATION	A.I.T.	I.I.T.
19	2	IDENTIFICATION PLATE	STAINLESS ST.	STAINLESS ST.
18	1	BOLT	DIN-933 A2	DIN-933 A2
17	1	BODY CONNECTOR SEAL	AISI 316L + PTFE + GRAPHITE	AISI 316L + PTFE + GRAPHITE
16	--	NUT	A 194 Gr. 2HM	A 194 Gr. 8M
15	--	STUD	A 193 Gr. B7M	A 193 Gr. B8M
14	1	WRENCH	NODULAR IRON	NODULAR IRON
13	1	ANTIFRICTION WASHER	25% G.F. + PTFE	25% G.F. + PTFE
12.1	1	NUT	AISI 303	AISI 303
12	1	GLAND NUT	AISI 303	AISI 303
10	2	DISK SPRING	AISI 303	AISI 303
9	1	GLAND	AISI 303	AISI 303
8	--	GLAND PACKING	GRAPHITE	GRAPHITE
7	1	"O" RING	FKM	FKM
6	1	STEM THRUST SEAL	25% G.F. + PTFE	25% G.F. + PTFE
5	1	STEM	A 479 Tp.316	A 479 Tp.316
4	2	SEAT RING	TFM-1600	TFM-1600
3	1	BALL	NOTE 1	NOTE 1
2	1	BODY CONNECTOR	A 216 Gr. WCB (C ≤ 0.25%)	A 351 Gr. CF8M
1	1	BODY	A 216 Gr. WCB (C ≤ 0.25%)	A 351 Gr. CF8M

Rev.	Modification	Date	Nam.	Approv.
0	First issue	02-09	J.U.	

Dimensions: mm.	Drawn	09-09-09	J. Urbano
Weight:	Checked	09-09-09	J. Rubio
	Appr. Eng.		

JC Valves

JC Fábrica de válvulas, s.a.
08830 Sant Boi de Llobregat (Spain)
Tel. + (34) 936 54 86 94 // Fax + (34) 936 54 86 95
e.mail: technical@jc-valves.com

Substitutes:
Substitutes by:
Scale: ---

GENERAL DIMENSIONS
FIG. 315/415 A.I.T / I.I.T. DN-1/2" ~ DN-8" Class-150 RF FB
WRENCH

Ref.:
Drawing nº.: 090909 0