

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

Certificate No.: M297-1/09 - 9587

Client: JC Fábricas de válvulas, S. A.

Office: Sant Joan Despí (BCN)

Client's Order No.: ---

Date: 24.03.09

Inspection dates

First: 24.03.09

Order Status: Complete

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 appropriate test pressure and leakages recorded accordingly. Subsequently manually opened up under test pressure differential and finally the valve was fully hydrottested 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. Operability 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.

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



Surveyor Javier Aranda García

SGS Tecnos, S.A.

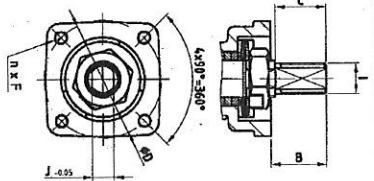
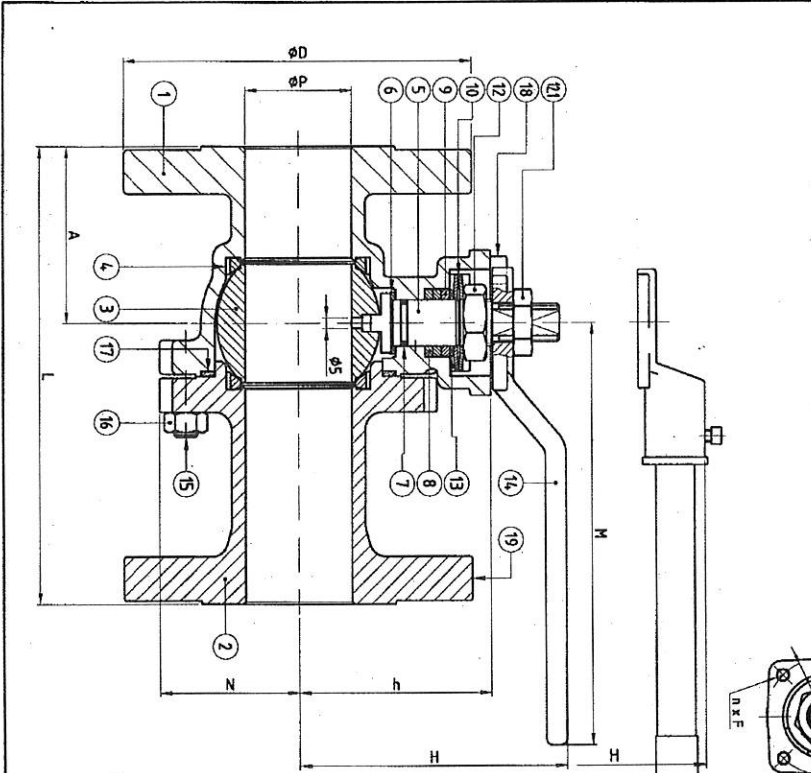
C/ Las Planas, 1 - Nave B
Poligono Industrial Font Santa
08970 Sant Joan Despi (Barcelona)
Tel.: (34) 93 477 01 71 - 93 477 01 69
Fax: (34) 93 373 15 00

DOCUMENTS ATTACHED:

Sheets reviewed and stamped
Accordingly.

090909

DN	L	ØD	ØP	A	M	H	h	N
1/2"	108 / 140	88.9 / 95	15	4.7 / 5.0	170	68	4.1	31
3/4"	117 / 152	98.5 / 111.5	20	5.0 / 5.5	170	70	4.3	33
1"	127 / 165	108 / 124	25	5.2 / 7.0	170	86	5.85	39
1 1/2"	165 / 190	127 / 155.5	4.0	6.5 / 8.0	200	122.5	8.5	48
2"	178 / 216	152 / 165	50	6.1 / 8.3	200	122.5	9.15	53
2 1/2"	190 / --	178 / --	65	7.5 / --	350	14.0	10.4	78
3"	203 / 283	191 / 210	78	7.85 / 11.8	450	190	11.85	87
4"	229 / 305	229 / 252	100	9.0 / 13.3	466	192.5	14.4	108
6"	394 / 403	379.5 / 318	151	17.4 / 160	775	259	20.3	152
8"	457 / 502	343 / 384	203	20.9 / 239	845	319	23.0	202



DN	BALL VALVES STEM DIMENSIONS				WEIGHT (kg)	QUANTITY	ITEM		
	ISO 5211	B	C	ØD					
1/2"	F 05	17	11	5.0	4 x M6	M10	1	1.7 / 2.4	---
3/4"	F 05	18	11	5.0	4 x M6	M10	7	2.2 / 3.5	---
1"	F 05	22	21	5.0	4 x M6	M12	8	2.9 / 4.6	---
1 1/2"	F 07	33	32	7.0	4 x M8	M18	12	6 / 9.2	---
2"	F 07	33	32	7.0	4 x M8	M18	12	8.5 / 11.5	---
2 1/2"	F 07	34	33	7.0	4 x M8	M22	15	13.3 / ---	---
3"	F 10	34	33	10.2	4 x M10	M22	15	18.5 / 25	---
4"	F 10	45	43.5	10.2	4 x M10	M28	19	29.3 / 39.5	---
6"	F 12	56	54.5	12.5	4 x M12	M36	24	64.5 / 88.1	---
8"	F 14	69	67	14.0	4 x M16	M48	32	123.2 / 160.5	---

POS.	QUAN.	DENOMINATION	ALT.
19	2	IDENTIFICATION PLATE	STAINLESS ST.
18	1	BOLT	DN-933 A2
17	1	BODY CONNECTOR SEAL	ANSI 316L + PTFE + GRAPHITE
16	---	NUT	A 194 Gr. 29M
15	---	STUD	A 193 Gr. B7M
14	---	WRENCH	MODULAR IRON
13	1	ANTIFRICATION WASHER	25% G.F. + PTFE
12	1	NUT	ANSI 303
11	1	GLAND NUT	ANSI 303
10	2	DISC SPRING	ANSI 303
9	1	GLAND	ANSI 303
8	1	GLAND PACKING	GRAPHITE
7	1	GRAND RING	EQM
6	1	STEM THRUST SEAL	25% G.F. + PTFE
5	1	STEM	A 479 10.316
4	2	SEAL RING	17M-1600
3	1	BALL	NOTE 1
2	1	BODY CONNECTOR	A 216 Gr. WCB (C ≤ 0.25%)
1	1	BODY	A 216 Gr. WCB (C ≤ 0.25%)

NOTE 1
 DN-1/2" - 1" : A 479 10.316
 DN-1 1/2" - 8" : A 351 Gr. CF8M

Rev. 0: First issue
 Modified by: ---
 Drawn: ---
 Checked: ---
 Weight: ---
 Appr. Eng: ---
 Substitutes by: ---

GENERAL DIMENSIONS
 FIG. 316416 ALT./ILT. DN-1/2" - DN-8" Class 150 RF-FB
 WRENCH

Rev.: ---
 Drawing n°: 090909

JC Valves
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JC Fabrica de valvulas, s.a.
 c/ Josep Sant Jordi de Llorens (C/109)
 08930 Sant Joan de Vilatorrada (BCN)

Gr. 08: ---
 Date: ---
 Date: ---
 Nam.: ---
 Approv.: ---