

Project: FIRE TEST FOR SOFT-SEATED
FLANGED BALL VALVE

Certificate Number: BCL 9800596/4

Client: J.C. FABRICA DE VALVULAS, S.A.

Office: BARCELONA

Client's Order Number: -----

Date: 15.06.98

Order Status: complete

Inspection Dates

First: 15.05.98

Final: 15.05.98

This certificate is issued to Messrs. J.C. FABRICA DE VALVULAS, S.A. upon their request that the undersigned Surveyor to this Society did attend their works at Rubi - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in API 607-1993 on the following type of valve:

A manually operated soft seated flanged ball valve of 1/2" reduced bore, bi-directional as per Fig. 715 A.I.T. DN 1/2", ANSI 150# RF, RB

Body material : A-216- WCB

Seats: PTFE

Ball material: A-351 CF8M

Manufacturers identifying numbers: BODY: 715151

Body connector: -----

Mass: 1,6 Kgs

Marks:

BODY :: NYB
BODY CONNECTOR : JD

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

The valve, filled with water under test pressure, was put in a box and exposed to flames with and environmental temperature between 760 - 980°C. All measure temperatures shall be above 705°C. The body temperature shall be at 593° C minimum and bonnet temperature of 650°C minimum for a period of during 30 minutes and established the leakage through the seat and external to atmosphere during this period. The temperature was checked and recorded every each thirty seconds, while leakages were determined using containers collecting the water leaked during burn period. Afterwards water spray so that it is rapidly cooled to below 100°C within ten minutes. Internal leakage measure during cooling time. Following operational test. Subsequently manual opened up and closed to under test pressure differential and finally the valve was hidrotested during five minutes and during this period internal and external leakage were measured.

.. / ..

NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report no. API 607-715/1/2"

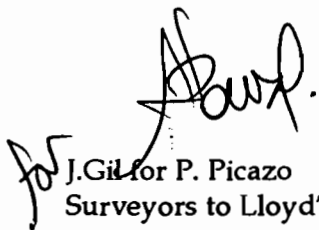
- 1.-Internal leakage during burning test - Satisfactory
- 2.-External leakage during burning and cooling test - Satisfactory
- 3.-Operatibility to full open position test - Satisfactory
- 4.-Internal and External leakage during after operational test - Satisfactory

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 partially destroyed.

The manufacturers Fire Safe Test Report no. API 607-715/1/2" and drawing 2272/715AIT15 herewith attached were satisfactory checked and signed.

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

<u>NPS</u>	<u>CLASS RATING</u>	<u>MATERIALS</u>
1/4", 3/8", 1/2", 3/4"	150# and 300#	Carbon steel, (see drawing)


J. Gil for P. Picazo
Surveyors to Lloyd's Register

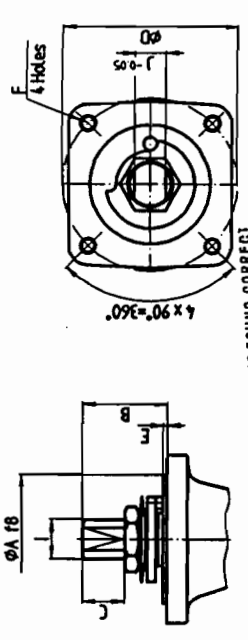


DOCUMENTS ATTACHED:
15 sheets reviewed and stamped accordingly

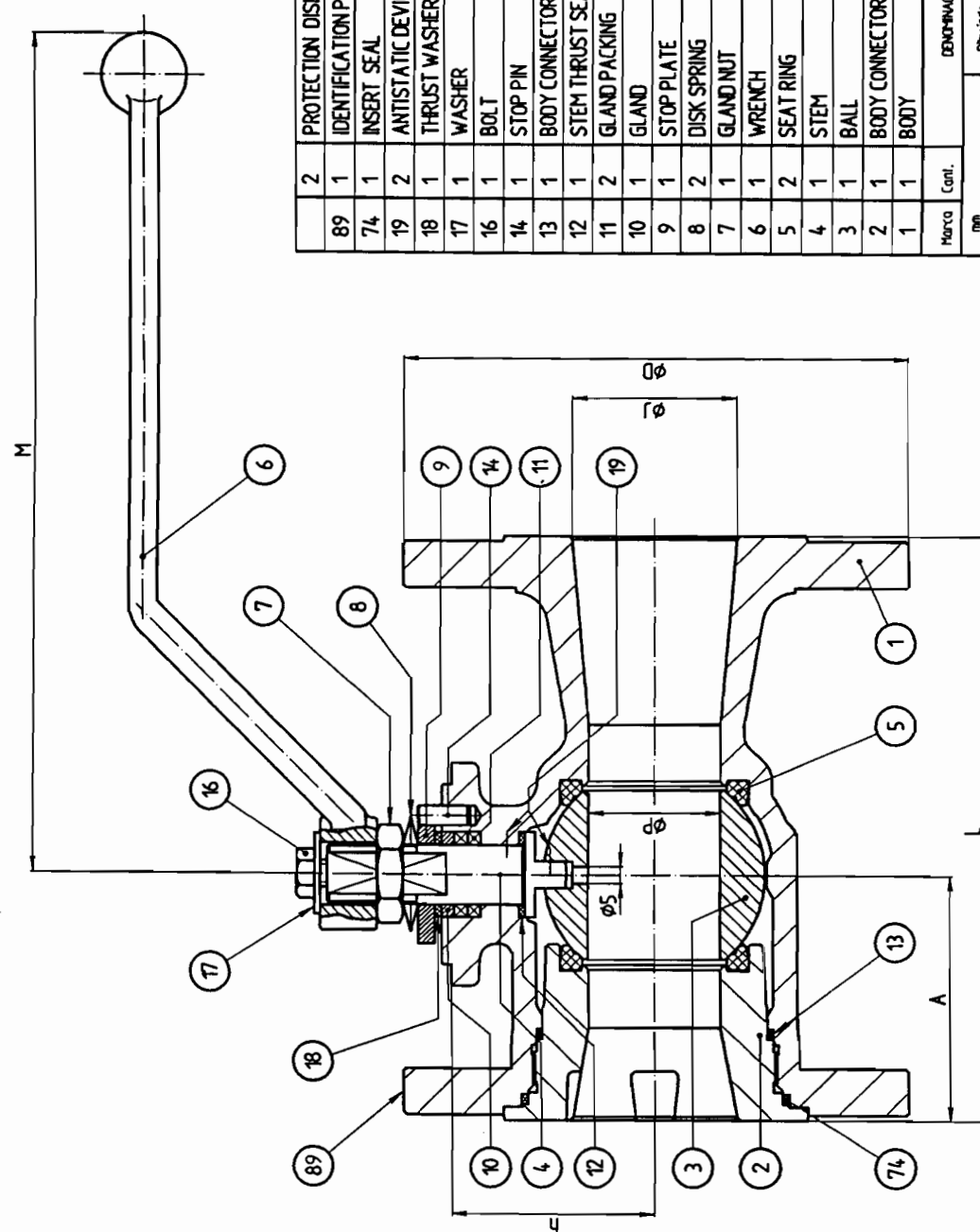
NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

DN	BALL VALVES FREE STEM DIMENSIONS										PESO (Kg.) WEIGHT	CANTIDAD QUAN	POS. ITEM	
	A	B	C	∅D	E	F	I	J	M	N				
1/2"	35	22.5	8.5	50	15	M6	M10x15	9	166	54	9.5	15.7	16	215

VIEW A



NOTED AND FOUND CORRECT
ATTACHED TO R. CERTIFICATE
NO. B.L. 58705364
SHEET 15 OF 15



Part No.	PROTECTION DISK FLANGED	ADHESIVE	100 mm x 9 mm x 0.4 ~ 0.5 mm ∅32 x ∅29 x 3.6
89	IDENTIFICATION PLATE	STAINLESS ST.	
74	INSERT SEAL	GRAPHITE	
19	ANTISTATIC DEVICE	STAINLESS ST.	
18	THRUST WASHER	25% G.F. PTFE	∅16 x ∅10 x 1
17	WASHER	ZINC PLATED CARBON ST.	5120 / 17 16 / 6 / 83
16	BOLT	DIN 933 5.6 ZINC	DIN 933 M5 x 12 5.6 ZINC
14	STOP PIN	CARBON ST.	5 x 12 DIN-6325
13	BODY CONNECTOR SEAL	PTFE	∅27 x ∅24.3 x 2.8
12	STEM THRUST SEAL	25% G.F. PTFE	∅15 x ∅10 x 1
11	GLAND PACKING	GRAPHITE	∅16 x ∅10 x 3
10	GLAND	AISI 303	75.15.10 5 / 11 / 86
9	STOP PLATE	CARBON ST.	515 / 09.1 27 / 7 / 95
8	DISK SPRING	CARBON ST.	DIN 2093
7	GLAND NUT	CARBON ST.	8 / 6 / 83
6	WRENCH	MODULAR IRON	7 / 15 / 95
5	SEAT RING	PTFE	A75N15 6 / 9 / 95
4	STEM	A 276 / 4.79 Tp. 316	E75N15 12 / 97
3	BALL	A 276 / 4.79 Tp. 316	715.15.3 12 / 97
2	BODY CONNECTOR	A 105	L715A15-M1 7 / 95
1	BODY	A 216 Gr. WCB (C ≤ 0.25%)	C715A15-M3 7 / 95



EDIFICACION		MATERIAL		FECHA	
Marco	Cont.				
mm	20-05-98	Victor F.			
Dimensiones	Comprobado				
Peso (kg)	1.8" x 1.8"				
Sustituido por	Escala				
Sustituye a					

JC Fábbrica de válvulas, S.A.
Hospitallet de L. (Barcelona)

Ref.
JC® BALL VALVE
FIG.715 A.I.T DN-1/2" ANSI150 RF RB
Planon*
2272 / 715A15



Project: FIRE TEST FOR SOFT-SEATED
FLANGED BALL VALVE

Certificate Number: BCL 9800596/3

Client: J.C. FABRICA DE VALVULAS, S.A.

Office: BARCELONA

Client's Order Number: -----

Date: 15.06.98

Order Status: complete

Inspection Dates

First: 15.05.98

Final: 15.05.98

This certificate is issued to Messrs. J.C. FABRICA DE VALVULAS, S.A. upon their request that the undersigned Surveyor to this Society did attend their works at Rubi - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in API 607-1993 on the following type of valve:

A manually operated soft seated flanged ball valve of 1" reduced bore, bi-directional as per Fig. 715 A.I.T. DN 1", ANSI 150# RF,RB

Body material : A-216- WCB

Seats: PTFE

Ball material: A-351 CF8M

Manufacturers identifying numbers: BODY: 715251

Body connector: -----

Mass: 2,7 Kgs

Marks:

BODY	:	NZR
BODY CONNECTOR	:	JP

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

The valve, filled with water under test pressure, was put in a box and exposed to flames with and environmental temperature between 760 - 980°C. All measure temperatures shall be above 705°C. The body temperature shall be at 593° C minimum and bonnet temperature of 650°C minimum for a period of during 30 minutes and established the leakage through the seat and external to atmosphere during this period. The temperature was checked and recorded every each thirty seconds, while leakages were determined using containers collecting the water leaked during burn period. Afterwards water spray so that it is rapidly cooled to below 100°C within ten minutes. Internal leakage measure during cooling time. Following operational test. Subsequently manual opened up and closed to under test pressure differential and finally the valve was hidrottested during five minutes and during this period internal and external leakage were measured.

.. / ..

NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report no. API 607-715/1"

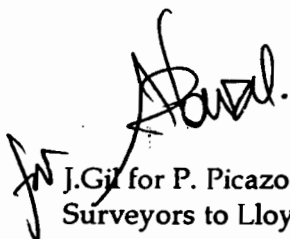
- 1.-Internal leakage during burning test - Satisfactory
- 2.-External leakage during burning and cooling test - Satisfactory
- 3.-Operability to full open position test - Satisfactory
- 4.-Internal and External leakage during after operational test - Satisfactory

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 partially destroyed.

The manufacturers Fire Safe Test Report no. API 607-715/1" and drawing 2271/715AIT25 herewith attached were satisfactory checked and signed.

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

<u>NPS</u>	<u>CLASS RATING</u>	<u>MATERIALS</u>
½", 1", 1¼", 1½"	150# and 300#	Carbon steel, (see drawing)


for J. Gil for P. Picazo
Surveyors to Lloyd's Register



DOCUMENTS ATTACHED:
13 sheets reviewed and stamped accordingly

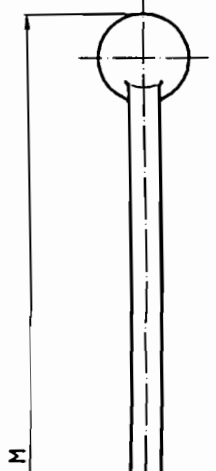
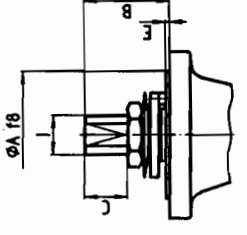
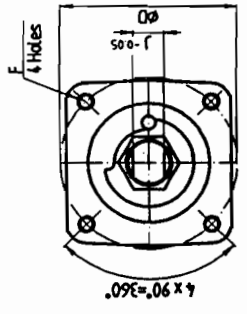
NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

2271

DN	L	φD	φP	φJ	A	M	H	h
1"	127	108	20	25	65	166	105	29

BALL VALVES-FREE STEPDIMENSIONS									
DN	φA	B	C	φD	E	F	I	J	
1"	35	23	8.5	50	3	M6	M12x1.5	9	
									PESO (Kg) WEIGHT 2.7
									CANTIDAD QUANTITY
									POS. ITEM

VIEW A



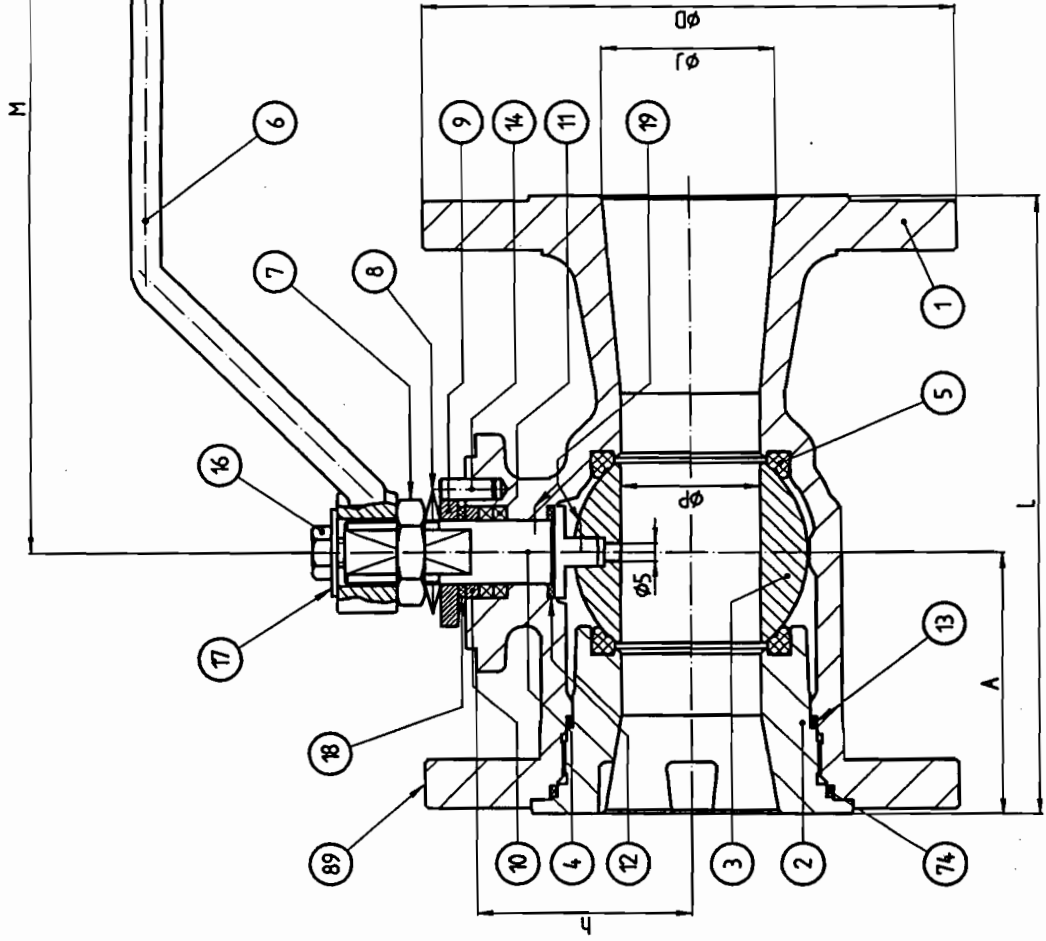
2	PROTECTION DISK FLANGED	ADHESIVE	
89	IDENTIFICATION PLATE	STAINLESS ST.	100 mm x 9 mm x 0.4 ~ 0.5 mm
74	INSERT SEAL	GRAPHITE	φ46.8 x φ4.3 x 3.8
19	ANTISTATIC DEVICE	STAINLESS ST.	
18	THRUST WASHER	25% G.F. PTFE	φ18 x φ12 x 0.5
17	WASHER	ZINC PLATED CARBON ST.	5120 / 17 16 / 6 / 83
16	BOLT	DIN 933 M5 x 12 5.6 ZINC	
14	STOP PIN	CARBON ST.	5 x 12 DIN-6325
13	BODY CONNECTOR SEAL	PTFE	φ38.5 x φ36.5 x 3
12	STEM THRUST SEAL	25% G.F. PTFE	φ18 x φ12 x 13
11	GLAND PACKING	GRAPHITE	φ18 x φ12 x 3.5
10	GLAND	AIISI 303	5120 / 10 - 1 23 / 7 / 87
9	STOP PLATE	CARBON ST.	00200930 23 / 7 / 92
8	DISK SPRING	CARBON ST.	DN-20 B - 25 DIN 2093
7	GLAND NUT	CARBON ST.	00200710 23 / 11 / 88
6	WRENCH	MODULAR IRON	M15ND-M2 4 / 96
5	SEAT RINGED AND FOUND CORRECT	PTFE	00200520-M2 2 / 1 / 92
4	STEM	A 276/479 Tp.316	159075 30 / 9 / 94
3	BALL	A 276/479 Tp.316	00200311 12 / 97
2	BODY CONNECTOR	A 105	13 / 1 / 93
1	BODY	A 216 Gr. WCB (C)	13 / 1 / 93

Marca	Denominacion	MATERIAL	FECHA
Victor F.	20-05-98	M15ND-M2	
Dimensiones	Dibujo	00200520-M2	
Peso (kg)	Comprobado	159075	
Sustituido por	V. B. Jng.	00200311	
Sustituye a	Excala.	13 / 1 / 93	

JC Fábrica de válvulas, s.a.
Hospital de L.L. (Barcelona)

FIG. 715 A.I.T DN-1" ANSI150RF RB

Ref. 271/75AIT25



Project: FIRE TEST FOR SOFT-SEATED
FLANGED BALL VALVE

Certificate Number: BCL 9800547/3

Client: J.C. FABRICA DE VALVULAS, S.A.

Office: BARCELONA

Client's Order Number: -----

Date: 22.05.98

Order Status: complete

Inspection Dates

First: 17.04.98

Final: 17.04.98

This certificate is issued to Messrs. J.C. FABRICA DE VALVULAS, S.A. upon their request that the undersigned Surveyor to this Society did attend their works at Rubi - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in API 607-1993 on the following type of valve:

A manually operated soft seated flanged ball valve of 2" reduced bore, bi-directional as per Fig. 715 A.I.T. DN 2", ANSI 150# RF,RB

Body material : A-216- WCB

Seats: PTFE

Ball material: A-351 CF8M

Manufacturers identifying numbers: BODY: 715501

Body connector: 7150020

Mass: 7,9 Kgs

Marks:

BODY	:	M45
BODY CONNECTOR	:	F

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

The valve, filled with water under test pressure, was put in a box and exposed to flames with and environmental temperature between 760 - 980°C. All measure temperatures shall be above 705°C. The body temperature shall be at 593° C minimum and bonnet temperature of 650°C minimum for a period of during 30 minutes and established the leakage through the seat and external to atmosphere during this period. The temperature was checked and recorded every each thirty seconds; while leakages were determined using containers collecting the water leaked during burn period. Afterwards water spray so that it is rapidly cooled to below 100°C within ten minutes. Internal leakage measure during cooling time. Following operational test. Subsequently manual opened up and closed to under test pressure differential and finally the valve was hidrotested during five minutes and during this period internal and external leakage were measured.

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All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report no. API 607-715/2"

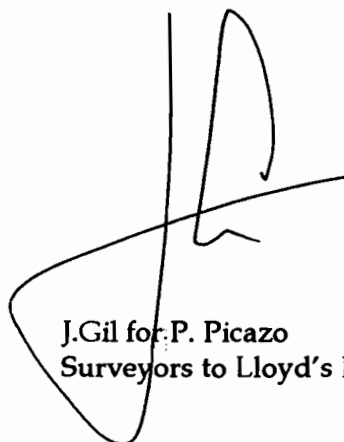
- 1.-Internal leakage during burning test - Satisfactory
- 2.-External leakage during burning and cooling test - Satisfactory
- 3.-Operability to full open position test - Satisfactory
- 4.-Internal and External leakage during after operational test - Satisfactory

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 partially destroyed.

The manufacturers Fire Safe Test Report no. API 607-715/2" and drawing 2234/715AIT50L herewith attached were satisfactory checked and signed.

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

<u>NPS</u>	<u>CLASS RATING</u>	<u>MATERIALS</u>
1½, 2, 2½, and 3"	150# and 300#	Carbon steel, (see drawing)

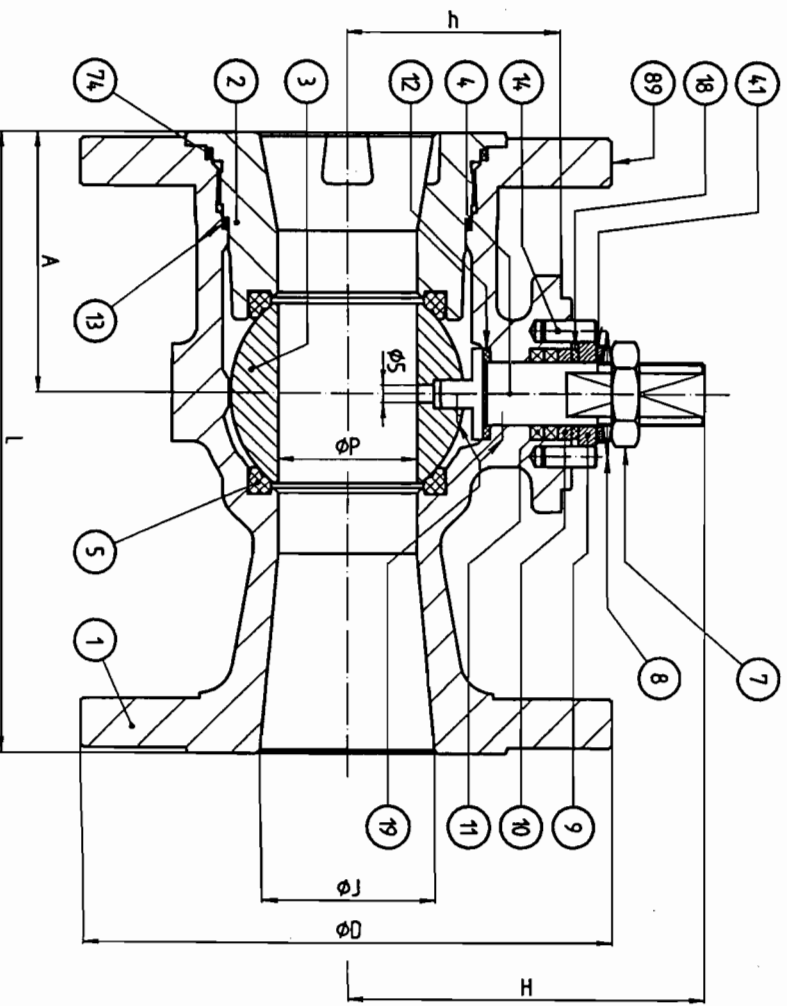
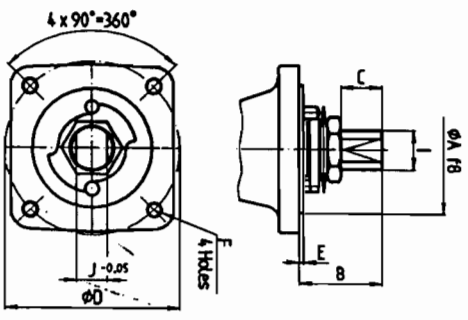

J. Gil for P. Picazo
Surveyors to Lloyd's Register



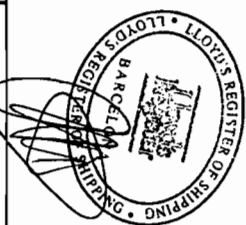
DOCUMENTS ATTACHED:
13 sheets reviewed and stamped accordingly

NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

DN	ΦD	ΦP	ΦJ	A	H	h
2"	152.4	4.0	5.0	7.5	10.3	6.15



BALL VALVES/FREE STEM DIMENSIONS										PESO (kg)	CANTIDAD	POS.
DN	A	B	C	ΦD	E	F	I	J	K	WEIGHT	QUAN	ITEM
2"	55	4.15	1.9	7.0	3	1.8	1.5	1.3		7.9		



2	PROTECTION DISK FLANGED	ADHESIVE	
89	IDENTIFICATION PLATE	STAINLESS ST.	100 mm x 13 mm x 0.4 - 0.5 mm
74	INSERT SEAL	GRAPHITE	Φ81 x Φ77 x 3.5
41	SPACER	CARBON ST.	200040 / 41 27 / 6 / 86
19	ANTISTATIC DEVICE	STAINLESS ST.	
18	THRUST WASHER	25% G.F. PTFE	Φ25.7 x Φ18 x 2
14	STOP PIN	CARBON ST.	6 x 16 DIN-6325
13	BODY CONNECTOR SEAL	PTFE	Φ71 x Φ68 x 3.5
12	STEM THRUST SEAL	25% G.F. PTFE	Φ25.7 x Φ18 x 2
11	GLAND PACKING	GRAPHITE	Φ26 x Φ18 x 5
10	GLAND	ALSI 303	514.0 / 10 - 1 23 / 7 / 87
9	STOP PLATE	CARBON ST.	00400930 23 / 7 / 92
8	DISK SPRING	CARBON ST.	DN-40 B - 35.5 DIN 2093
7	GLAND NUT	CARBON ST.	00400770 28 / 1 / 89
5	SEAT RING	PTFE	00400530 11 / 12 / 91
4	STEM	A 276 / 479 Td. 316	E40 99 / 2 / 93
3	BALL	A 276 / 479 Td. 316	00400311 12 / 97
2	BODY CONNECTOR	A 105	L75A50-M1 12 / 96
1	BODY	A 216 G. WCB (C ≤ 0.25%)	L75A50-M2 2 / 96

DIMENSIONES		mm		mm	
Dobrado		22-04-98		Victor F.	
Comprobado		22-04-98		M...	
Peso (kg)		V" B" Ing.		Escala	
Sustituido por					
Sustituye a					

JC Fàbrica de vlvulas, S.A.
Hospital del Ll. Barcelona)

JC BALL VALVE
FIG.715 A.I.T DN-2" ANSI150 RF RB
FREE STEM

REGON
NOTED AND FOUND CO
ATTACHED TO GENTING
2234 / 715A150L
NO. 12 197

Lloyd's Register

Project: FIRE TEST FOR SOFT SEATED
FLANGED BALL VALVE

Certificate Number: BCL 98005477/4

Client: J.C. FABRICA DE VALVULAS, S.A.

Office: BARCELONA

Client's Order Number:

Date: 22.05.98

Inspection Dates:

First: 07.05.98

Final: 07.05.98

Order Status: complete

This certificate is issued to Messrs. J.C. FABRICA DE VALVULAS, S.A. upon their request that the undersigned Surveyor to this Society did attend their works at Rubí - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in API 607 1993 on the following type of valve:

A manually operated soft seated flanged ball valve of 4" reduced bore, bi-directional as per Fig. 715 A. IT DN 4", ANSI 150# RF, RB
Body material: A-216-WCB
Seats: PTFE
Ball material: A-351 CF8M
Manufacturers identifying numbers: BODY: 715811
Body connector: 7181020B
Mass: 30 Kgs
Marks:
BODY 038
BODY CONNECTOR G

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

The valve, filled with water under test pressure, was put in a box and exposed to flames with and environmental temperature between 760 - 980°C. All measure temperatures shall be above 705°C. The body temperature shall be at 593° C minimum and bonnet temperature of 650°C minimum for a period of during 30 minutes and established the leakage through the seat and external to atmosphere during this period. The temperature was checked and recorded every each thirty seconds, while leakages were determined using containers collecting the water leaked during burn period. Afterwards water spray so that it is rapidly cooled to below 100°C within ten minutes. Internal leakage measure during cooling time. Following operational test. Subsequently manual opened up and closed to under test pressure differential and finally the valve was hidrotested during five minutes and during this period internal and external leakage were measured.

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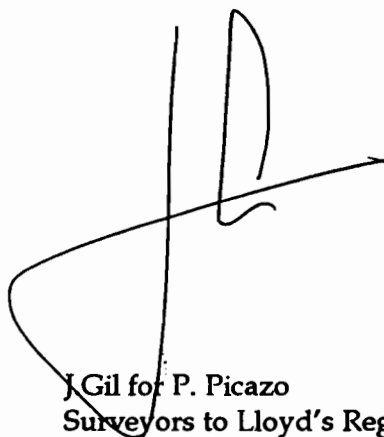
- 1.-Internal leakage during burning test - Satisfactory
- 2.-External leakage during burning and cooling test - Satisfactory
- 3.-Operability to full open position test - Satisfactory
- 4.-Internal and External leakage during after operational test - Satisfactory

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 partially destroyed.

The manufacturers Fire Safe Test Report no. API 607-715/4" and drawing 2244/715AIT100 herewith attached were satisfactory checked and signed.

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

<u>NPS</u>	<u>CLASS RATING</u>	<u>MATERIALS</u>
3", 4", 5", and 6"	150# and 300#	Carbon steel, (see drawing)





J Gil for P. Picazo
Surveyors to Lloyd's Register

DOCUMENTS ATTACHED:
13 sheets reviewed and stamped accordingly

NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

2244

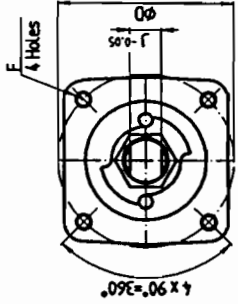
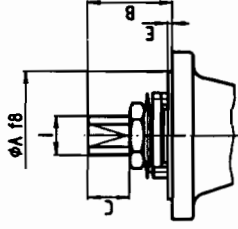
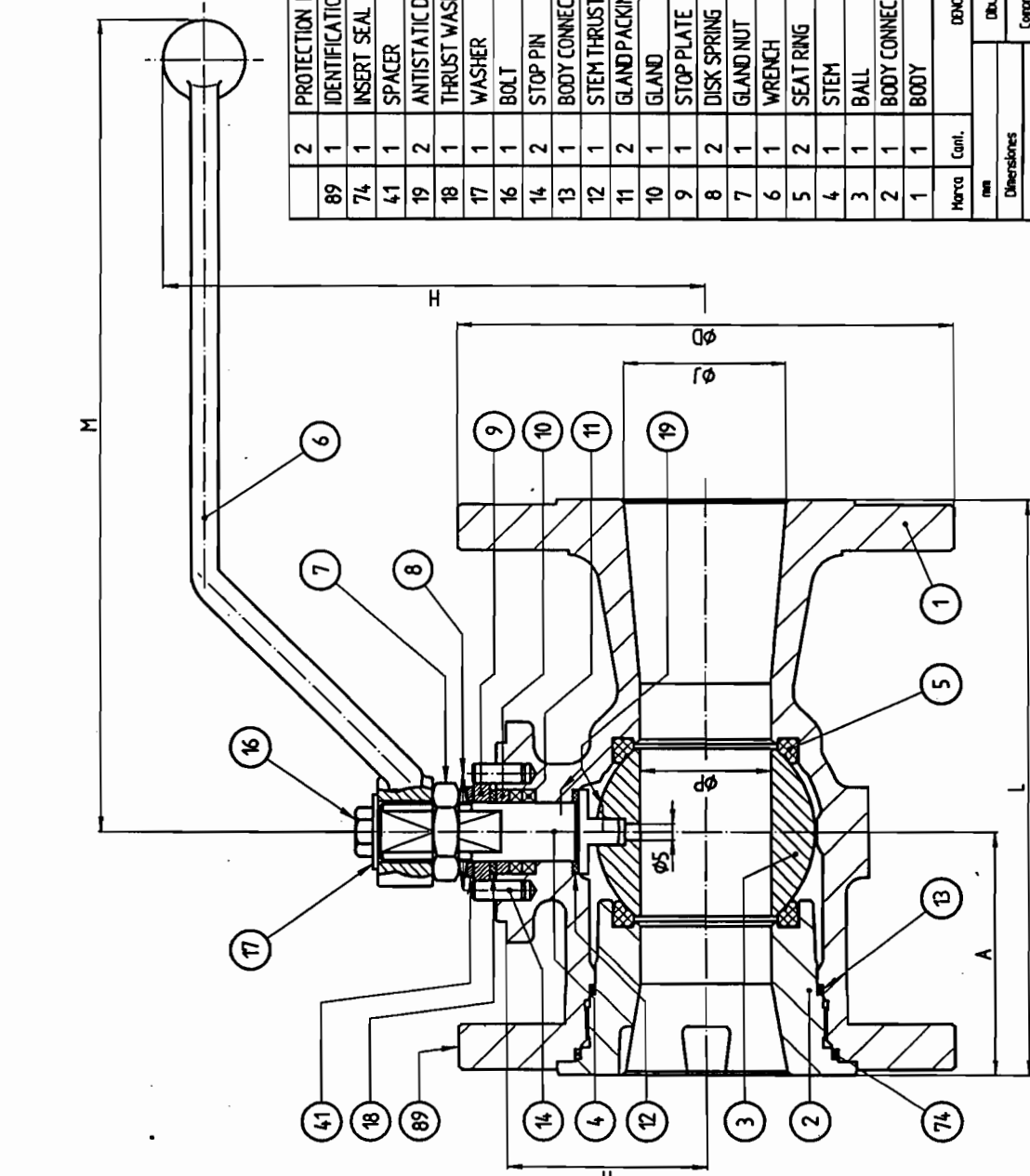
DN	L	ØD	ØP	ØJ	A	M	H	h
4"	229	229	80	102	104	450	275	92

BALL VALVES FREE STEM DIMENSIONS							PESO (Kg.)	CANTIDAD	POS.
DN	ØA	B	C	ØD	E	F	WEIGHT	QUANTITY	ITEM
4"	70	44.5	19	102	3	M10	M25x15	18	

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VIEW A

VIEW A



2	PROTECTION DISK FLANGED	ADHESIVE
89	1 IDENTIFICATION PLATE	STAINLESS ST.
74	1 INSERT SEAL	GRAPHITE
41	1 SPACER	CARBON ST.
19	2 ANTISTATIC DEVICE	STAINLESS ST.
18	1 THRUST WASHER	25% GF. PTFE
17	1 WASHER	ZINC PLATED CARBON ST.
16	1 BOLT	DIN 933 5.6 ZINC
14	2 STOP PIN	CARBON ST.
13	1 BODY CONNECTOR SEAL	PTFE
12	1 STEM THRUST SEAL	25% GF. PTFE
11	2 GLAND PACKING	GRAPHITE
10	1 GLAND	AISI 303
9	1 STOP PLATE	CARBON ST.
8	2 DISK SPRING	CARBON ST.
7	1 GLAND NUT	CARBON ST.
6	1 WRENCH	NUCLEAR IRON
5	2 SEAT RING	PTFE
4	1 STEM	A 276/479 Tp. 316
3	1 BALL	A 351 Gr. CF8M
2	1 BODY CONNECTOR	A 105
1	1 BODY	A 216 Gr. WCB (C ≤ 0.25%)

DENOMINACION		MATERIAL		FECHA	
Desarrollo	12-05-98	Victor F.			
Comprobado	12-05-98				
V.P. Ing.					
Escrita y aprobada por: <i>[Signature]</i>					
Sustituido por: <i>[Signature]</i>					
Dimensiones: <i>[Signature]</i>					
Peso (kg): <i>[Signature]</i>					
Sustituye a: <i>[Signature]</i>					
SHEET: <i>[Signature]</i>					



Fábrica de válvulas, s.a.
Hospital de L. (Barcelona)

Sustituido por: <i>[Signature]</i>		Escrita y aprobada por: <i>[Signature]</i>	
Dimensiones: <i>[Signature]</i>		Comprobado: <i>[Signature]</i>	
Peso (kg): <i>[Signature]</i>		V.P. Ing. <i>[Signature]</i>	
Sustituye a: <i>[Signature]</i>			
SHEET: <i>[Signature]</i>			

Ref. JC® BALL VALVE
ANSI150 RF RB

Plano: / 715AIT100



Project: FIRE TEST FOR SOFT-SEATED
FLANGED BALL VALVE

Certificate Number: BCL 9800603/3

Client: J.C. FABRICA DE VALVULAS, S.A.

Office: BARCELONA

Client's Order Number: -----

Date: 30.06.98

Order Status: complete

Inspection Dates

First: 09.06.98

Final: 09.06.98

This certificate is issued to Messrs. J.C. FABRICA DE VALVULAS, S.A. upon their request that the undersigned Surveyor to this Society did attend their works at Rubi - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in API 607-1993 on the following type of valve:

A manually operated soft seated flanged ball valve of 8" full bore, bi-directional as per Fig. 515 A.I.T. DN 8", ANSI 150# RF,FB

Body material : A-216- WCB

Seats: PTFE

Ball material: A-351 CF8M

Manufacturers identifying numbers: BODY: 5102001

Body connector: 5102002

Mass: 167 Kgs

Marks:

BODY	:	M-30
BODY CONNECTOR	:	M-31

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

The valve, filled with water under test pressure, was put in a box and exposed to flames with and environmental temperature between 760 - 980°C. All measure temperatures shall be above 705°C. The body temperature shall be at 593° C minimum and bonnet temperature of 650°C minimum for a period of during 30 minutes and established the leakage through the seat and external to atmosphere during this period. The temperature was checked and recorded every each thirty seconds, while leakages were determined using containers collecting the water leaked during burn period. Afterwards water spray so that it is rapidly cooled to below 100°C within ten minutes. Internal leakage measure during cooling time. Following operational test. Subsequently manual opened up and closed to under test pressure differential and finally the valve was hidrottested during five minutes and during this period internal and external leakage were measured.

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NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report no. API 607-515/8"

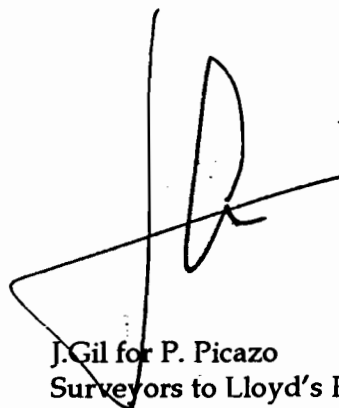
- 1.-Internal leakage during burning test - Satisfactory
- 2.-External leakage during burning and cooling test - Satisfactory
- 3.-Operatibility to full open position test - Satisfactory
- 4.-Internal and External leakage during after operational test - Satisfactory


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 partially destroyed.

The manufacturers Fire Safe Test Report no. API 607-515/8" and drawing 2380/515NAI1T200RA herewith attached were satisfactory checked and signed.

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

<u>NPS</u>	<u>CLASS RATING</u>	<u>MATERIALS</u>
6" and larger	150# and 300#	Carbon steel, (see drawing)


J. Gil for P. Picazo
Surveyors to Lloyd's Register

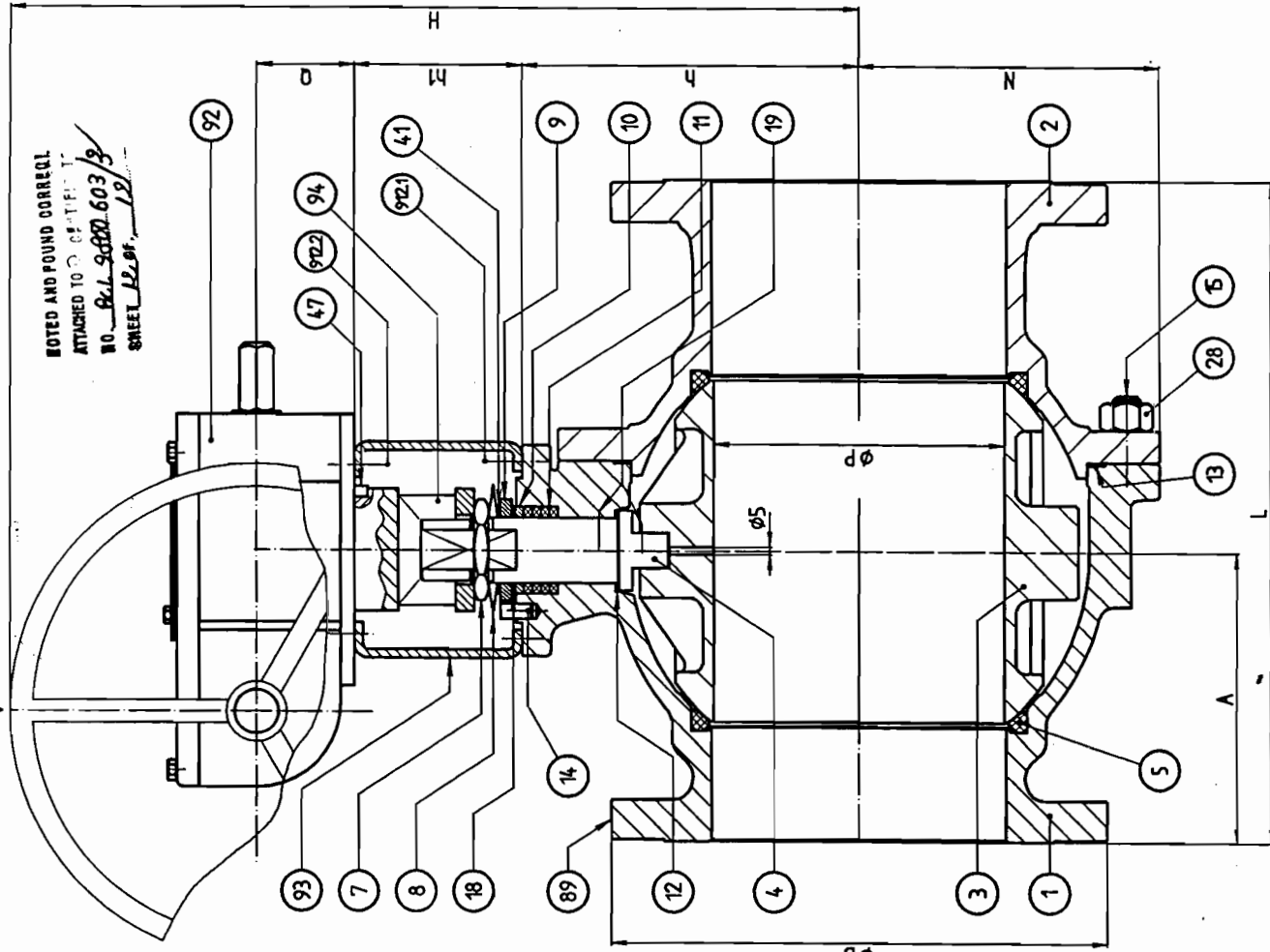
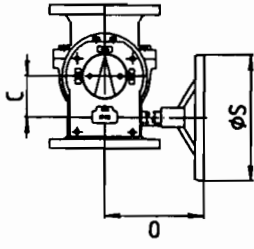


DOCUMENTS ATTACHED:
12 sheets reviewed and stamped accordingly

2380

DN	L	ØD	ØP	A	H	h	m1	N	Ø	ØS	C	D
8"	457	343	203	200	573.5	233	100	208	40.5	400	71	209

VIEW FOR A



NOTED AND FOUND CORRECT
 ATTACHED TO Dwg. Nº. 12
 NO. BALL VALVE 603/B
 SHEET 12 OF 12

DN	REDUCTOR WORM GEAR	PESO (Kg.) WEIGHT	C. ADAD QUANTITY	POS. ITEM
8"	AB 550N	167		

912.2	4	BOLT	DIN 912 8.8	M16 x 25
912.1	4	BOLT	DIN 912 8.8	M16 x 25
94	1	COUPLING	ZINC PLATED CARBON ST.	AC200AB550N 3/3/95
93	1	MOUNTING BRACKET	ZINC PLATED CARBON ST.	ESF14F14100 30/6/94
92	1	WORM GEAR OPERATOR	ALECTO	AB 550N
	2	PLASTIC CAP	PLASTIC	
89	1	IDENTIFICATION PLATE	STAINLESS ST.	14.0 mm x 13 mm x 0.4 ~ 0.5 mm
47	1	KEY	CARBON ST.	DIN 6885 A 14 x 9 x 50
41	1	SPACER	CARBON ST.	5184 / 41 M1 5 / 91
28	12	NUT	A 194 Gr. 2M	5184 / 28 31/9/84
19	2	ANTISTATIC DEVICE	STAINLESS ST.	
18	1	THRUST WASHER	25% GF. PTFE	
15	12	STUD	A 193 Gr. B7	Ø60 x Ø45 x 2 5183 / 15 - 2 11/91
14	1	STOP PIN	CARBON ST.	10 x 24 DIN-6325
13	1	BODY CONNECTOR SEAL	AIISI 316L + GRAPHITE	5001300 (Ø338.5xØ37x3.2) 11/11/92
12	1	STEM THRUST SEAL	25% GF. PTFE	Ø55.7 x Ø45 x 3
11	4	GLAND PACKING	GRAPHITE	Ø60 x Ø45 x 7.2
10	1	GLAND	AIISI 303	0084-1000-M1 18/7/90
9	1	STOP PLATE	CARBON ST.	0084-0920 30/4/92
8	2	DISK SPRING	CARBON ST.	5184 / 08 30/5/83
7	1	GLAND NUT	CARBON ST.	5184 / 07 12/12/78
5	2	SEAT RING	PTFE	A200T1 19/10/94
4	1	STEM	A 276/479 Tp.316	EPI200BF 19/12/95
3	1	BALL	A 351Gr. CF8M	BC200 25/9/95
2	1	BODY CONNECTOR	A 216 Gr. WCB (C = 0.25%)	L5BA200-M1 9/95
1	1	BODY	A 216 Gr. WCB (C = 0.25%)	C5BA200-M4 9/95

MATERIA		FECHA	
Marca	Cont.	Nº DE PLANO	
DENOMINACION			
Dibujado		Victor F.	
Comprobado		17-06-98	
Vº Jº Ing.		17-06-98	
Escala			
Sustituido por			
Sustituye a			
<p align="center">JC Fábrica de válvulas, s.a. Hospital de LL (Barcelona)</p>			
<p align="center">JC® BALL VALVE FIG.515 PIN; A.I.T; DN8" ANSI150 RF FB WORM GEAR OPERATOR</p>			
Ref.		Plano nº	
		2380 / 515NAH1200RA	

Project: FIRE TEST FOR SOFT-SEATED
FLANGED BALL VALVE

Certificate Number: BCL 9800603/1

Client: J.C. FABRICA DE VALVULAS, S.A.

Office: BARCELONA

Client's Order Number: -----

Date: 30.06.98

Order Status: complete

Inspection Dates

First: 26.05.98

Final: 26.05.98

This certificate is issued to Messrs. J.C. FABRICA DE VALVULAS, S.A. upon their request that the undersigned Surveyor to this Society did attend their works at Rubi - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in API 607-1993 on the following type of valve:

A manually operated soft seated flanged ball valve of 8" reduced bore, bi-directional as per Fig. 715 A.I.T. DN 8", ANSI 150# RF,RB

Body material : A-216- WCB

Seats: PTFE

Ball material: A-351 CF8M

Manufacturers identifying numbers: BODY: 715841

Body connector:

Mass: 77 Kgs

Marks:

BODY	:	M05
BODY CONNECTOR	:	J

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

The valve, filled with water under test pressure, was put in a box and exposed to flames with and environmental temperature between 760 - 980°C. All measure temperatures shall be above 705°C. The body temperature shall be at 593° C minimum and bonnet temperature of 650°C minimum for a period of during 30 minutes and established the leakage through the seat and external to atmosphere during this period. The temperature was checked and recorded every each thirty seconds, while leakages were determined using containers collecting the water leaked during burn period. Afterwards water spray so that it is rapidly cooled to below 100°C within ten minutes. Internal leakage measure during cooling time. Following operational test. Subsequently manual opened up and closed to under test pressure differential and finally the valve was hidrotested during five minutes and during this period internal and external leakage were measured.

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NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report no. API 607-715/8"

- 1.-Internal leakage during burning test - Satisfactory
- 2.-External leakage during burning and cooling test - Satisfactory
- 3.-Operability to full open position test - Satisfactory
- 4.-Internal and External leakage during after operational test - 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 partially destroyed.

The manufacturers Fire Safe Test Report no. API 607-715/8" and drawing 2333/715AIT200 herewith attached were satisfactory checked and signed.

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

<u>NPS</u>	<u>CLASS RATING</u>	<u>MATERIALS</u>
6" and larger	150# and 300#	Carbon steel, (see drawing)


J. Gil for P. Picazo
Surveyors to Lloyd's Register



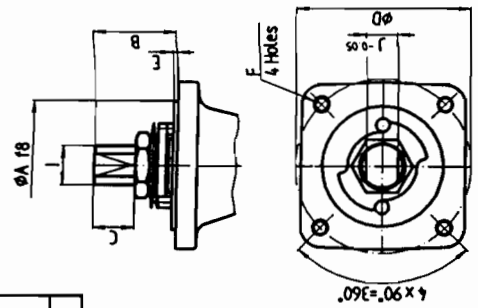
DOCUMENTS ATTACHED:
14 sheets reviewed and stamped accordingly

NOTICE: This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

2333

DN	L	ØD	ØP	ØJ	A	M	H	h
8"	292	34.3	144	200	135	715	251	158

BALL VALVES. FREE STEM DIMENSIONS						PESO (Kg.)	C	JAD	POS. ITEM.	
UN	ØA	B	C	ØD	E	F	I	J	QUANTITY	
8"	85	56	28	125	3	M12	M3x2	25	77	



Ball 9800.603/A
14 14

2	PROTECTION DISK-FLANGE	ADHESIVE	
89	IDENTIFICATION PLATE	STAINLESS ST.	140 mm x 13 mm x 0.4 ~ 0.5 mm
74	INSERT SEAL	GRAPHITE	Ø246 x Ø238 x 5.7
41	SPACER	CARBON ST.	200/25 / 41 18 / 5 / 82
19	ANTISTATIC DEVICE	STAINLESS ST.	Ø45 x Ø35 x 2
18	THRUST WASHER	25% GF. PTFE	5182 / 17 3 / 5 / 82
17	WASHER	ZINC PLATED CARBON ST.	DIN 933 M12 x 20
16	BOLT	DIN 933 5.6 ZINC.	8 x 20 DIN 6325
14	STOP PIN	CARBON ST.	Ø224.7 x Ø221.5 x 5
13	BODY CONNECTOR SEAL	PTFE	Ø45.7 x Ø35 x 3
12	STEM THRUST SEAL	25% GF. PTFE	Ø45 x Ø35 x 6.4
11	GLAND PACKING	GRAPHITE	5182 / 10 - 1 31 / 17 / 86
10	GLAND	AISI 303	00820920 16 / 12 / 91
9	STOP PLATE	CARBON ST.	5182 / 08 27 / 5 / 83
8	DISK SPRING	CARBON ST.	5182 / 07 4 / 7 / 78
7	GLAND NUT	CARBON ST.	M12xND 6 / 97
6	WRENCH	MODULAR IRON	71840510 2 / 1 / 92
5	SEAT RING	PTFE	E125 19 / 9 / 93
4	STEM	A 276 / 479 Tp. 316	75-200-3 15 / 9 / 92
3	BALL	A 351G. CF8M	L75A200-M1 12 / 96
2	BODY CONNECTOR	A 216 G. WCB (C ≤ 0.25%)	C75A200-M1 5 / 4 / 93
1	BODY	A 216 G. WCB (C ≤ 0.25%)	

DENOMINACION		MATERIAL		FECHA	
mm	05-06-98	Victor F.			
Dimensiones	Comprobado				
Peso (Kg)	V. B. Ing.				
Sustituido por	Escala				
Sustituye a					

JC Fábbrica de válvulas, S.A.
Hospitalet de LL (Barcelona)

JC BALL VALVE
FIG.715 A.I.T DN 8" ANSI150 RF RB

Planim^o
2333 / 715AIT200

