

**FIRE TEST REPORT**F.T.R. N.: **9509**

The fire safe test was performed in accordance with:

- * BS 6755 : Part 2 : edition 1987
- * API STD 607 III Edition Nov. 1985
- * API Spec. 6 FA II Edition Feb., 15 1994

SITE : Casorezzo (MI) - Italy

DATE **16 MAR, 1996**

VALVE TYPE: Ball Valve

MANUFACTURER'S NAME : PENTA s.r.l.
Via Torricelli 25,27
25080 Molinetto (BS)
Italy

The valve subject to fire test is representative of the type and size here below described.

VALVE TYPE : SAT1 RATING : ANSI 300NOMINAL SIZE : 2" FULL | X | REDUCED | | BOREBODY MATERIAL : ASTM A105 BALL MATERIAL : AISI 316

MARKING : _____

DRAWING N. : 73000-DPL Rev. : 0 Date 12-02-92.

The valve, before fire testing, has passed all the required hydrostatic and air type and production pressure tests required by the standard to which the valve was manufactured, and is compliant with the drawings and the parts list supplied by the manufacturer.

ENCLOSURE : Assembly drawing with bill of materials



- Witnessed
- Monitoring
- Reviewed

Signed G. Ronier

**FIRE TEST REPORT****F.T.R. N.: 9509****VALVE TYPE: SAT1****NOMINAL SIZE: 2"****BODY MATERIAL: ASTM A105****MARKING:****RATING: ANSI 300****FULL | X | REDUCED | | BORE****BALL MATERIAL: AISI 316****TEMPERATURES RECORDING**

TIME (min)	PRES. (BAR)	T1 (°C)	T2 (°C)	T3 (°C)	T4 (°C)
start	37.5	709	810		
2	37.5	859	876	425	424
4	37.5	900	901	450	456
6	37.5	905	910	480	475
8	37.5	914	920	516	520
10	37.5	913	932	569	579
12	37.5	918	935	610	615
14	37.5	920	940	650	651
16	37.5	920	944	660	665
18	37.5	925	945	675	680
20	37.5	927	951	680	688
22	37.5	927	952	689	703
24	37.5	930	950	695	703
26	37.5	931	951	697	704
28	37.5	929	953	699	705
30	37.5	928	951	698	705

 Witnessed
 Monitoring
 Reviewed

Signed G. Renier

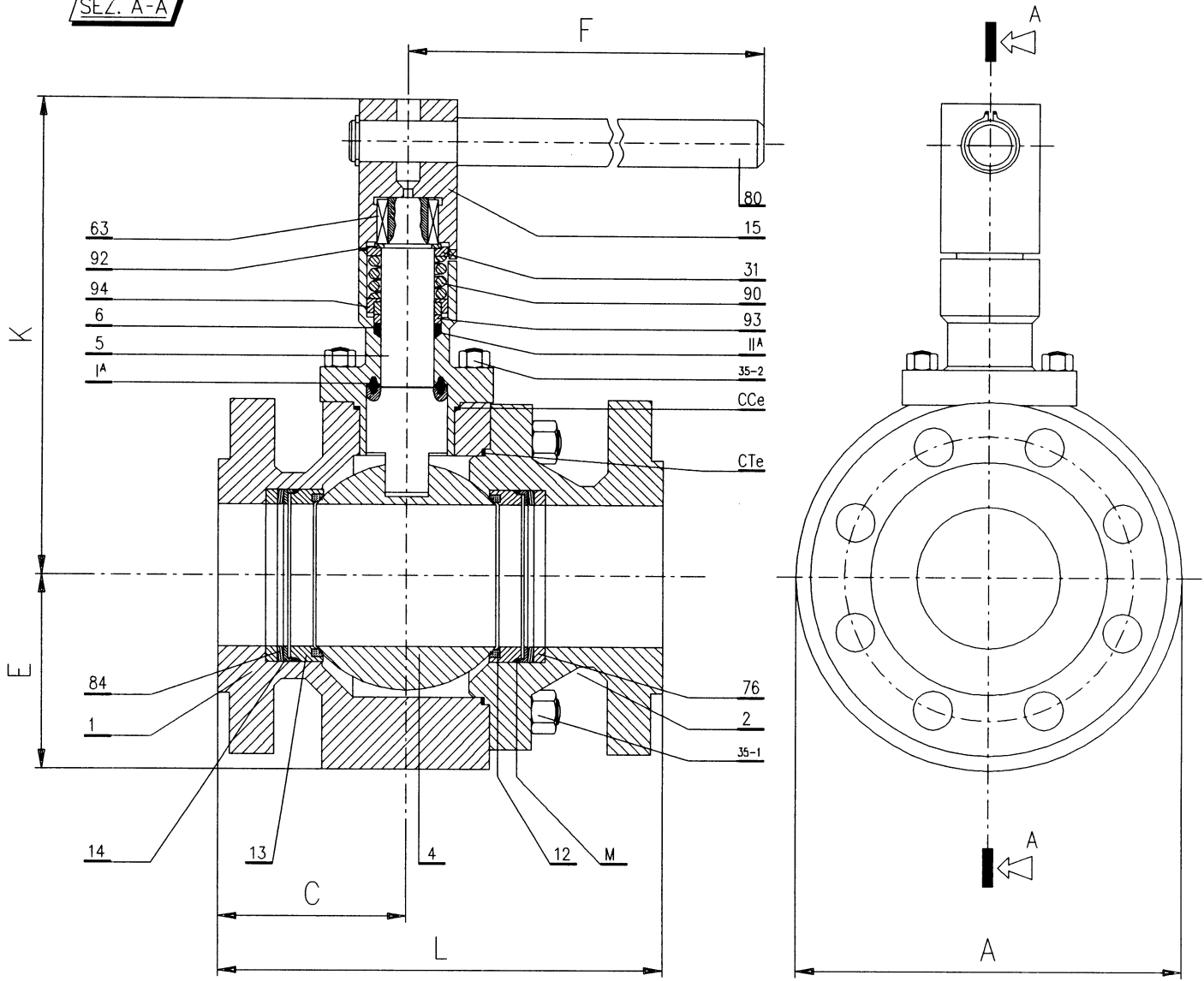
**FIRE TEST REPORT****F.T.R. N.: 9509****VALVE TYPE : SAT1****NOMINAL SIZE : 2"****BODY MATERIAL : ASTM A105****MARKING :****RATING : ANSI 300****FULL | X | REDUCED | | BORE****BALL MATERIAL : AISI 316****LEAKAGES RECORDING**

	Actual (c.c. / min)	allowed leakage 2" ANSI 300 (c.c. / min.)	allowed leakage (c.c. / min. / inc.)
Seat leakage at the high test pressure during the burn period	80	800	400
External leakage during burn cool-down period with valve in high pressure test	4,40	200	100
Time required for valve to cool-down to 100°C	28	minutes	
Seat leakage at the low test pressure after cool-down for the test period of 5 min.	0	80	40
External leakage at the low test pressure of 3,5 BAR after cool-down for the test period of 5 min.	0	40	20
Maximum force to operate	49	Nm	Method used: Torque Wrench
External leakage at high test pressure after cool-down, with valve in fully open position for the test period of 5 min.	26	400	200

Observations : _____
 Witnessed
 Monitoring
 Reviewed


Signed G. Renier

SEZ. A-A



Pieces	Part Name	Part	Material	Notes
1	Body	1	A105	
1	Body connector	2	A105	
1	Ball	4	316	
1	Stem	5	316	Lubricated
1	Upper cover	6	A105	
2	Seat insert	12	PENTAFITE	
2	Seat holder	13	316	
2	Compression ring	14	316	
1	Wrench head	15	316	
1	Stem spring compres. ring	31	316	
-	Body connector bolt	35-1	B7-2H	
-	Upper cover bolt	35-2	B7-2H	
2	Feather key stem	63	C40	
2	Distance	76	316	
1	Handle	80	Fe37	
-	Seat spring	84	X-750	
1	Stem spring	90	302	
1	Stem retaining ring	92	316	
1	Gland	93	316	Lubricated
1	Stem plain bearing	94	316	Lubricated
1	Primary stem seal	IIA	Grafoil	
1	Secondary stem seal	IIA	Grafoil	
2	Seat gasket	M	Grafoil	
1	Body connector gasket	CTe	Grafoil	
1	Upper cover gasket	CCe	Grafoil	

DN	ANSI	A mm	C _{RF} mm	E mm	F mm	K ₁ mm	L _{RF} mm	Weight Kg
2"	300	166	91	83	465	226	216	

 penta	COMMESSA No. Production Order	MATERIALE Material	PEZZI No. Pieces
	DISEGNO No. 73000-DPL Drawing		Scala/Scale --
DESCRIZIONE Description Valvola a sfera modello "SAT1" Ball valve type "SAT1"	Revision 0	Date 12-02-92	Description ISSUE
	Note	Drawn F.ROSSI	Checked <i>[Signature]</i>

Witnessed
 Monitoring
 Reviewed

Signed G. Renier
[Signature]