ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Industrie Service

CERTIFICATE

(Certificate of conformity with technical requirements in:)

API STANDARD 6FA FOURTH EDITION, JUNE 2018

Certificate No.:270889

Ref. Test report No.:270890

Name and postal address of applicant: ValPro s.r.o.
Kopcianska 10, Bratislava, Slovakia

We hereby certify that the fire test on below valves have been conducted at the laboratory designated by manufacturer and witnessed by TÜV inspector according to requirements of API STANDARD 6FA FOURTH EDITION, JUNE 2018 manufacturer's special requirements, the testing results of valves meet the requirements of API STANDARD 6FA FOURTH EDITION, JUNE 2018

1. Description of Test Valve :

Type of Test Valve	Q347N-900LB-8"-AA3 Ball Valve
Description of Valve	Ball Valve
Valve Size (NPS)	8"
Pressure Rating (ANSI Class)	Class 900
Valve Body Material	ASTM A350 LF2

2. Qualified Range of Valves :

Type	Ball Valves
Description of Valves	Ball Valves
Qualified Sizes (NPS) *(according to API 6FA Table 4)*	8" and larger
Qualified Pressure Ratings (Class) *(according to API 6FA Table 6)*	900;1500
Qualified Marking *(according to API 6FA Para.4.5)*	Qualified valves shall be permanently marked: **6FA**
Remark: the technical data of test valve see back of this certificate appendix 1.	

This certificate is issued according to API STANDARD 6FA FOURTH EDITION, JUNE 2018, based upon the result of testing report on above mentioned test valve. The additional valves qualification shall be limited on similar valves of same basic design as the test valve and same nonmetallic materi als as the test valve in the seat-to-closure member seal, seat-to-body seal, stem seal, and body joint and seal according to API STANDARD 6FA FOURTH EDITION, JUNE 2018, Para.5.

Chen Guilin

TÜV SÜD Industrie Service GmbH

Shanghai, July 24, 2020
(Place, date)

Guilin Chen
TÜV SÜD Industrie Service GmbH
Westendstr.199
80686 München Germany

Industrie Service

Appendix 1:

Certificate No.:270889

Ref. Test report No.:270890

Name and postal address of applicant: ValPro s.r.o.
Kopcianska 10, Bratislava, Slovakia

Technical Data of Valve

1. Type of Test Valve: Q347N-900LB-8"-AA3 Ball Valve

2. Description of Test Valve: Ball Valve

3. Details of Valve:

Valves Size (NPS) / Material / Part Name	8"
Body	ASTM A350 LF2
Bonnet	ASTM A350 LF2
Ball	ASTM A350 LF2+ENP
Seat Insert	DEVLON-V
Stem	ASTM A182 F6a
Gasket	SS304+Graphite
Lower Cap	ASTM A350 LF2
Packing	Graphite
Yoke	ASTM A216 WCB
Nuts	ASTM A194 7
Bolts	ASTM A320 L7
Screw	ASTM A320 L7
O-Ring	VITON
Spring	INCONEL X-750
Seat Ring	ASTM A350 LF2
Design Drawing No.:	AA3 2020-06-09-01

TÜV SÜD Industrie Service GmbH

Guilin Chen

Shanghai, July 24, 2020
(Place, date)

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Industrie Service

Test Report

(Fire test for valves according to API STANDARD 6FA FOURTH EDITION, JUNE 2018)

Certificate No.:270889
Test Report No.:270890

Applicant: ValPro s.r.o.

Kopcianska 10, Bratislava, Slovakia

Inspection body: TÜV SÜD Industrie Service GmbH

Floor 3-13, No.151, Heng Tong Road, Shanghai, P. R. China

Lab of test: Quality Inspecting Center of Pump and Valve Products of Zhejiang Province

Test Date: June 18, 2020

Description of valves: Q347N-900LB-8"-AA3 Valve

Size:8"

Pressure Rating: Class 900

Drawing No.: AA3 2020-06-09-01

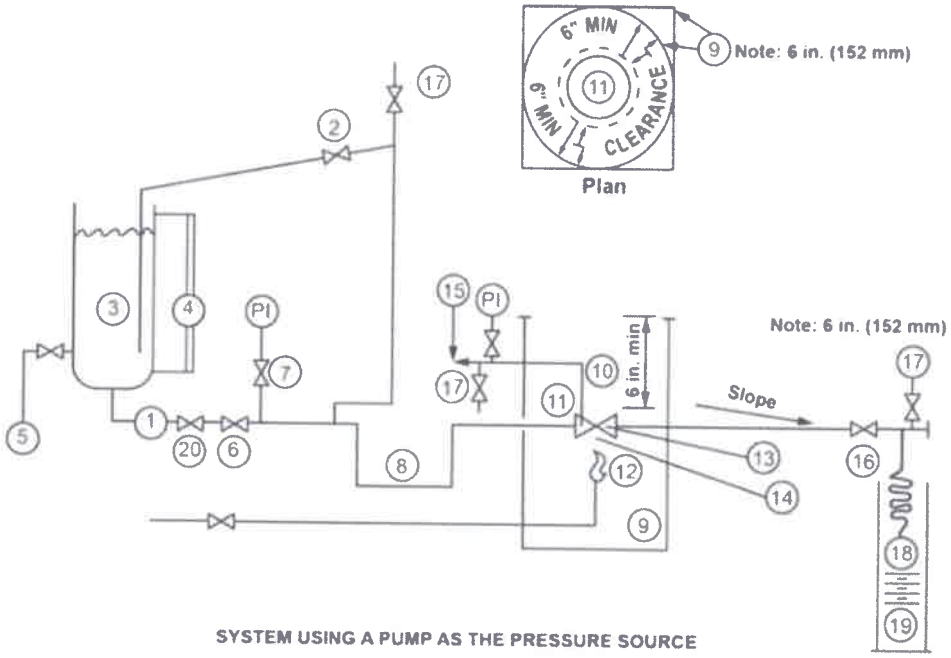
Test Witnessed By: WANG Zhilin / TÜV SÜD Inspector

Inspection and Tests

1. Conformity of Equipment

The test equipment was verified by TÜV SÜD inspector according to requirements of API STANDARD 6FA FOURTH EDITION, JUNE 2018, Para 4.3 and found satisfactory. The detail arrangement of the fire-test equipment is shown below:

Figure 1 Typical Fire-Test System Using a Pump as the Pressure Source



SYSTEM USING A PUMP AS THE PRESSURE SOURCE

Legend

1.Pressure source
tion

2.Pressure regulator and relief

3.Vessel for water

4.Calibrated sigh gauge or equivalent

5.Water supply

6.Shutoff Valve connected to center cavity of valve

7.Pressure gauge

8.Piping arranged to provide vapor trap

9.Flame envelope for test –horizontal clearance between any part of the valve and the closure shell shall be 6 in. (152mm) above

10.Minimum height of flame envelope shall be 6 in.(152mm) above the top of the valve

11. Test valve mounted horizontally with stem in horizontal posi-

12. Fuel supply to burners

13. Calorimeter-1½ " in. cubes

14. Flame temperature thermocouple

15. Pressure gauge and relief valve see precautions

16. Shutoff valve

17. Vent valve

18. Condenser

19. Calibrated container.

20. Check valve

2. Calibration of measurement and test instrument

The measurement and test instrument have been properly calibrated such as pressure gauge, thermo-couples, etc.

3. Technical Data of Test Valve:

a) Description of test valve

Type of Test Valves	Q347N-150LB-8"-AA3 Ball Valve
Description of Valves	Ball Valve
Pressure Class	Class 900
Valve Size	8"
Face to Face	ASME B16.10
Designed Standard	API6D

b)Details of technical data on test valve

Part Name	Materials
Body	ASTM A350 LF2
Bonnet	ASTM A350 LF2
Ball	ASTM A350 LF2+ENP
Seat Insert	DEVLON-V
Stem	ASTM A182 F6a
Gasket	SS304+Graphite
Lower Cap	ASTM A350 LF2
Packing	Graphite
Yoke	ASTM A216 WCB
Nuts	ASTM A194 7
Bolts	ASTM A320 L7
Screw	ASTM A320 L7
O-Ring	VITON
Spring	INCONEL X-750
Seat Ring	ASTM A350 LF2
Design Drawing No.:	AA3 2020-06-09-01

4. Visual and dimensional Check on Valve Specimen:

The specimen valve was chosen at random by the manufacturer in its workshop and submitted to the laboratory. The visual and dimensional check was performed according to drawing No. AA3 2020-06-09-01 and results found satisfactory. The mark was verified on valve as following:

--	8"	600	LF2
Manufacturer` Brand	Size	Class	Material

The sample valve was equipped with a worm gearbox.

5. Document Review:

The chemical and mechanical test report of forgings was reviewed and found satisfactory. Also the inspection report of strength test, seal test and pneumatic test were reviewed and found satisfactory.

6. Preparation before testing:

6.1 The thermocouples and calorimeters were installed properly according to Figure 1,2,3,4 in API 6FA. Two thermocouples (part 14) are installed to measure flame temperature, one is located under valve body, another is located under valve stem, both within 1". Two calorimeters (part 13) are positioned to the same place as the thermocouples do, and a third one is positioned nearby the bottom cover.

6.2 The test system including test valve (part 11) was cleaned through by water before testing. All air was purged from test valve and testing system by water.

6.3 The test system was pressurized to 11.2 MPa (test pressure) after the test valve and system upstream of valve have been completely full of water and system downstream of the test valve have been completely empty of water. The system and test valve were carefully checked for leakage when the test pressure was held at 11.2 MPa. No leakage was found on system and test valve.

7. Fire Test:

7.1. Fire test with high pressure

The fire test was conducted according to API 6FA Section 4.4. The flame temperature reached 761℃ within 2 minutes after ignition. The test pressure and temperature were maintained during the fire test. The temperature and pressure were recorded continuously by the operators. The system and test valve was cooled down below 100℃ within 9 minutes by natural after 30 minutes fire test. The loss of water weight in vessel was measured by weighing scale and water in calibrated container (part 19) were

read and recorded.

TÜV SÜD Industrie Service GmbH
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Shanghai 200070 P.R.China

Industrie Service

Test Report No.:270890

Test result of fire test with high pressure

Item	API 6FA Required Value	Actual Value
Test Pressure (MPa)	11.2 MPa	11.0 – 12.0 MPa
Test Temperature	761 - 980℃	771 – 804.5℃
Through-valve leakage according to API 6FA Para.4.4.2.2	≤ 400 ml / in. / min	47.9 ml / in. / min
Total weight of water through valve seat during cooling down period	0 ml	
Total time from fire test to cooling down	39 Minutes	
External Leakage according to API 6FA Para.4.4.2.2	≤ 100 ml / in. / min	0 ml / in. / min
Conclusion: the test result is satisfactory according to API 6FA.		

8. Operational Test:

The test valve was cooled below 100℃ within 9 minutes after complete the fire test. The operational test was conducted according to API 6FA Para. 4.4.4. Open the test valve against the high test pressure differential. The test valve was moved to a partly open position close to the shutoff valve. Vent the piping and test valve body cavity to remove air or steam.

Then measured and recorded external leakage for a period of five minutes after valve was in the open position at high test pressure. The test result was recorded on below:

Test result of operational test

Item	API 6FA Required Value	Actual Value
Test Pressure (MPa)	11.2 MPa	11.2 MPa
Test Time	5 minutes	
External Leakage according to API 6FA Para.4.4.4.2	≤ 200 ml / in. / min	2 ml / in. / min
Conclusion: the test result is satisfactory according to API 6FA.		

The undersigned, hereby declare that I have checked test valve and witnessed the fire test on the test valve according to API STANDARD 6FA FOURTH EDITION, JUNE 2018. The test result is satisfactory.

TÜV SÜD Industrie Service GmbH

TÜV SÜD Industrie Service GmbH

Date: July 24, 2020

WANG Zhilin

Annexes:

1) Copy of Drawing No. AA3 2020-06-09-01;
2) Copy of Test Record of Fire Test No. WFM202006141.