

Test Certificate

Certificate No.: 1611-075-218 A20-1

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We hereby certify that the item in the following was witnessed by our Inspector.

Manufacturer: LISHUI OUYI VALVE CO., LTD.

Address: #799-1 Jinniu Street, Bihu Industrial Zone Lishui, Zhejiang People's Republic of China

Place of test: Wenzhou City, Zhejiang Province, China Date of test: June 27th, 2016

Description: Ball Valve

Valve type	8" ANSI 150 FULL WELDING TRUNNION BALL VALVE
Drawing No.	OY20160613

Scope of Inspection and Testing:

- 1) Witness the fire test in accordance with ISO 10497:2010/ API Standard 607, 6th edition, 2010

Result(s) of Inspection and Testing:

Fire test was carried out in accordance with API 607, 6th edition, 2010 at the presence of DNV.GL inspector and all requirements of specification were met.

Qualification of other valve size and pressure ratings:

Conform to

Valves with the same type, size: 8" and above.

Pressure Ratings: Class 150LB and Class 300LB.

Associated Documents:

1. ANNEX to Test Certificate;
2. Valve Fire Tested by Wenzhou Yongjia Quality and Technology Supervision Bureau Inspection Institute.

Stamping

Place and date
Shanghai, China, 2016-6-27,



Andy Chen

Inspection Senior Engineer to DNV.GL
(Suzhou Office Leader)

ANNEX TO VALVE FIRE TEST CERTIFICATE

Certificate No. : 1611-075-218 A20-2

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Client/Manufacturer: LISHUI OUYI VALVE CO., LTD.
 #799-1 Jinniu Street, Bihu Industrial Zone Lishui, Zhejiang People's
 Republic of China

Fire test Specification: ISO 10497:2010/ API Standard 607.6th Edition, 2010.

Date of Test: 2016-6-27

Particulars of Valve: 8" ANSI 150

Size & Class:	8" ANSI 150
Type:	FULL WELDING TRUNNION BALL VALVE
Fig No:	OY20160613
Drawing No.	OY20160613

Valve Materials:

Body:	ASTM A105
Stem:	ASTM A105+ENP
Ball	ASTM A105+ENP
Seats:	RPTFE
Oring:	VITON
Gasket:	Graphite+SS304

Result:

The valve fire test complies with the standard requirement.

Stamping

Andy Chen

Inspection Senior Engineer to DNV·GL
 (Suzhou Office Leader)



Place /Date: 2016-6-27

ANNEX TO VALVE FIRE TEST CERTIFICATE

Certificate No. : 1611-075-218 A20-3

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Valve Inspection & Testing

The fire-tested valve has passed all the requirements of production pressure test to API 607 sixth Edition, Sept. 2010 and ISO 10497 third Edition, Feb. 2010

Associated Documentation:

1. Test Pressure during burn and Cool down: 1.5 Mpa
2. Temperature recorded 2 minutes after beginning and the remaining time throughout duration of test, with individual records for each thermocouple:

Colorimeter No.	Location placed	Temperature record	Remark
Thermocouple 1#	Bottom of body	2 minutes after beginning: 815.5°C Balance duration time: 808°C-858°C	Satisfactory
Thermocouple 2#	Flank of body	2 minutes after beginning: 820.5°C Balance duration time: 810°C-860°C	Satisfactory
Calorimeter cube 1#	Stem	Above 650°C 14.5 minutes	Satisfactory
Calorimeter cube 2#	Bottom of body	Above 650°C 15 minutes	Satisfactory

3. Through-seat Leakage during Burn: 65 ml/min
4. External Leakage during Burn and cool down: 45 ml/min
5. Time required for valve to cool to 100 deg C: 5 min
6. Through-seat Leakage (low pressure test): 12 ml/min
7. Valve was operated to fully open position: Yes
8. External leakage in open position: 8 ml/min
9. Valve is bi-directional and passed in both directions: Yes

Results: The tested valve Complies with international standards as mentioned in this certificate.

Stamping

Andy Chen
 Inspection Senior Engineer to DNV.GL
 (Suzhou Office Leader)



Place /Date: 2016-6-27

Test Certificate

Certificate No.: 1611-075-218 A21-1

Page 1 of 1

We hereby certify that the item in the following was witnessed by our Inspector.

Manufacturer: LISHUI OUYI VALVE CO., LTD.

Address: #799-1 Jinniu Street, Bihu Industrial Zone Lishui, Zhejiang People's Republic of China

Place of test: Wenzhou City, Zhejiang Province, China Date of test: June 27th, 2016

Description: Ball Valve

Valve type	8" ANSI 600 FULL WELDING TRUNNION BALL VALVE
Drawing No.	OY20160614

Scope of Inspection and Testing:

- 1) Witness the fire test in accordance with ISO 10497:2010/ API Standard 607, 6th edition, 2010

Result(s) of Inspection and Testing:

Fire test was carried out in accordance with API 607, 6th edition, 2010 at the presence of DNV.GL inspector and all requirements of specification were met.

Qualification of other valve size and pressure ratings:

Conform to

Valves with the same type, size: 8" and above.
Pressure Ratings: Class 150LB and Class 300LB.

Associated Documents:

1. ANNEX to Test Certificate;
2. Valve Fire Tested by Wenzhou Yongjia Quality and Technology Supervision Bureau Inspection Institute.

Stamping

Place and date
Shanghai, China, 2016-6-27,



Andy Chen

Inspection Senior Engineer to DNV.GL
(Suzhou Office Leader)

ANNEX TO VALVE FIRE TEST CERTIFICATE

Certificate No. : 1611-075-218 A21-2

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Client/Manufacturer: LISHUI OUYI VALVE CO., LTD.
 #799-1 Jinniu Street, Bihu Industrial Zone Lishui, Zhejiang People's
 Republic of China

Fire test Specification: ISO 10497:2010/ API Standard 607.6th Edition, 2010.

Date of Test: 2016-6-27

Particulars of Valve: 8" ANSI 600

Size & Class:	8" ANSI 600
Type:	FULL WELDING TRUNNION BALL VALVE
Fig No:	OY20160614
Drawing No.	OY20160614

Valve Materials:

Body:	ASTM A105
Stem:	ASTM A105+ENP
Ball	ASTM A105+ENP
Seats:	RPTFE
Oring:	VITON
Gasket:	Graphite+SS304

Result:

The valve fire test complies with the standard requirement.

Stamping

Andy Chen
 Inspection Senior Engineer to DNV·GL
 (Suzhou Office Leader)



Place /Date: 2016-6-27