



INSPECTION CERTIFICATE

Project: **Witnessing of the Fire Test for Butterfly Valves in accordance with ANSI/API Standard 607, Fifth Edition, June 2005**

Client: **Tomoe Valve Co. Ltd**

Office: **Batam**

Client's Order Number: **RFS - BTM /HW/O-0231-1, dated on 23.02.10**

Date: **17 March 2010**

Order Status: **Completed**

Inspection Dates

First: **01 March 2010**

Final: **11 March 2010**

This certificate is issued to **TOMOE VALVE Co.Ltd**

To certify that at the request of the client, the undersigned Surveyor did attended at the above dates at their workshop PT. Tomoe Valve Batam, Block F2 Latrade Industrial Park, Jl. Sei Binti Tanjung Uncang – Batam, 29422, Indonesia for the purpose of witnessing the Fire Safe-Test of Butterfly Valves. The acceptance criteria was in accordance with ANSI/API Standard 607, Fifth Edition, June 2005 and test method in accordance with ISO 10497-5; 2004.

Description of valve tested as follows :

Valve Type : Triple Offset Butterfly Valve

<u>Material Description</u>	<u>Heat No.</u>	<u>Nominal Size</u>	<u>Class</u>	<u>Serial No.</u>	<u>Drawing No.</u>	<u>Test Direction</u>
Body : ASTM A216 WCB	H9A21	8" / 200 mm	150 LBS	9BO7231	MK3-GA0-001-E	Preferred
Body : ASTM A216 WCB	H9A21	8" / 200 mm	150 LBS	9BO7232	MK3-GA0-001-E	Reverse
Body : ASTM 351 CF8M	H9A51	8" / 200 mm	150 LBS	9BO7233	MK3-GA0-001-E	Preferred
Body : ASTM 351 CF8M	H9A51	8" / 200 mm	150 LBS	9BO7235	MK3-GA0-001-E	R everse
Body : ASTM A216 WCB	H81M2	3" / 80 mm	150 LBS	9BO7236	MK3-GA0-001-E	Preferred
Body : ASTM A216 WCB	H9A21	3" / 80 mm	150 LBS	9BO7238	MK3-GA0-001-E	R everse
Body : ASTM 351 CF8M	H9A51	3" / 80 mm	150 LBS	9BO7239	MK3-GA0-001-E	Preferred
Body : ASTM 351 CF8M	H9A51	3" / 80 mm	150 LBS	9BO7241	MK3-GA0-001-E	R everse

CERTIFICATE /HEAT NUMBER :

Material certificates for each valve/component have been sighted and copy retained in this office for record purpose. Material certificate of inspection, Drawing and Record of test result were signed and stamped "NOTED".

TEST APPARATUS / INSTRUMENTATION :

Test system as per ANSI/Standard 607, Fifth Edition, June 2005 Figure 1 with exception of relief valve fitted. Venting undertaken by control valve against pressure gauge.

INSTRUMENT CALIBRATION :

1. Pressure Gauge, certificate and calibration record was sighted and found to be accepted.
2. Thermocouples, certificate and calibration record was sighted and found to be accepted.
3. Thermocouples Digital Thermometer, certificate and calibration record was sighted and found to be accepted.

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FIRE TEST PROCEDURES IN ACCORDANCE WITH ANSI/API STANDARD 607, FIFTH EDITION, JUNE 2005

The following scopes of inspection were carried out in accordance with above standard procedures :

1. Witness the test pressure at 2.8 MPa without any external leakage.
2. Witness the test pressure 0.2 MPa during burning and cooling down.
3. Witness and verify temperatures reading during burning of 30' min period and recorded in 30' sec interval.
4. Inspect and record of any through seat leakage during burning and pressurize period.
5. Inspect and record of any external leakage during burning and cooling down period.
6. Inspect and record of any through seat leakage during low pressure 0.2 MPa within 5' min period.
7. Witness Valve operational test to open position with pressurize at 1.5 MPa.
8. Inspect if any external leakage in the open position of valve to be tested.

TEST RESULT :

1. The Fire Test were deemed to have been carried out satisfactorily in accordance with the requirement of ANSI/API Standard 607, Fifth Edition, June 2005.
2. Visual examination of all valves, once removed from the test bench were found acceptable without any major indications to report.
3. The data package for each valve including drawings were signed and stamped "NOTED".
4. The test report completed by TOMOE Valve Co.Ltd was reviewed, signed and stamped.



Hary Widagdo
Surveyor to Lloyd's Register Asia

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