



Attestation of TA-LUFT VDI2440

Attestation No.:322340

Ref. report No. :322339

Manufacturer : Jiangsu Xin Zhong Xin Co.,Ltd

Postal address of manufacturer : NO.18 Danyan Road,Yanling Town, Danyang City,Jiangsu Province, China

Order Number : 7482580732

Tested Product Description:

Item	DN10 6000PSI Needle valve
Valve size	DN10
Pressure rating	6000PSI
Stem size	Φ8mm
Body/bonnet material	316L
Seal material	Stem sealing: Packing(PTFE) Body sealing: Threaded connect seal
Valve assembly drawing no.	6L32-FX8FN8-11

Test Condition:

Testing is performed according to TA Luft July 2002 and guideline VDI2440 November.2000 on the request of this client and the key test conditions have been specified according to the following information:

Test Fluid	99% Purity Helium
Test Temperature(°C)	RT
Test Pressure(bar):	414
No. of Switching Cycles	205
Specific Leakage Rate λ mbar·l/(s·m)	$\lambda \leq 10^{-4}$

Hereby, It is certified that the tested valve of the above mentioned company have been tested and the test results are accepted according to above mentioned specification. Details could be taken from the associated report with the No.: 322339

Shanghai, May. 28, 2025
(Place, date)

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Inspection-No.: 322339

REPORT OF THIRD PARTY INSPECTION

Client: Jiangsu Xin Zhong Xin Co.,Ltd.

NO.18 Danyan Road,Yanling Town, Danyang City,Jiangsu Province,
China.

Contact Person: Mr. Yang Zhicong

Manufacturer Name: Jiangsu Xin Zhong Xin Co.,Ltd.

NO.18 Danyan Road,Yanling Town, Danyang City,Jiangsu
Province, China.

Inspection Place: Lab of test: Wenzhou Haichuan Inspection Co. Ltd.

Haichuan 1st, North of G104, Oubei Street, Yongjia,
Wenzhou, Zhejiang, China

Contact Person: Mr. Yang Hui

Inspection Date: May.06~09.2025

Inspector: Wang Zhongxiang

Quality System Status: Acceptable

Order Number: 7482580732

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The test results refer exclusively
to the units under test.





Inspection-No.: 322339

1. Witness relevant tests

Nature Of Inspection:

This is to report that we, TÜV SÜD Certification and Testing (China) Co., Ltd Shanghai Office on May.06~09.2025 at the request of Jiangsu Xin Zhong Xin Co.,Ltd. conducted the following inspection:

1. Witness relevant tests

1.1 General Information

Jiangsu Xin Zhong Xin Co.,Ltd. commissioned us to witness valve fugitive emission test according to TA-LUFT 2002, sec. 5.2.6.3 & 5.2.6.4, guideline VDI 2440 Nov. 2000, sec 3.3.1.3 & 3.3.1.4 to verify whether the result can meet the specific leakage rate according to the German Clean Air Act($\lambda \leq 10^{-4}$ mbar·l/(s·m)) and for the test valve the leakage is $\leq 2.51 \times 10^{-4}$ mbar·l/s.

1.2 Tested Product Description:

The test samples have been chosen and the details of test samples can be seen in the following information. Details of the test sample can be seen in the annex.

Item	DN10 6000PSI Needle valve
Valve size	DN10
Pressure rating	6000PSI
Stem size	Φ8mm
Body/bonnet material	316L
Seal material	Stem sealing: Packing(PTFE) Body sealing: Threaded connect seal
Valve assembly drawing no.	6L32-FX8FN8-11

1.3 Test Condition:

The test has been carried out according to ISO15848-1:2015+Amd.1:2017 and the requirements of the customer. The key test conditions have been specified according to the following information:

Test Fluid	99% Purity Helium
Test Temperature(°C)	RT
Test Pressure(bar):	414
No. of Switching Cycles	205

1.4 Visual and dimensional check of the test valve:

The test 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. 6L32-FX8FN8-11 and results found satisfactory.

1.5 Preparation of the test valve

Before the fugitive emission test, the test valve was hydrostatic tested under 621bar, the test showed no visible leakage or deformation. Then the valve was cleaned and dried.

1.6 Calibration of test instrument



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The test instrument was turned on, warmed up according to the requirements of the equipment manufacturer and calibrated with the standard.

1.7 Fugitive emission test and measurement

The test valve was mounted on a test rig with the stem positioned vertical. And the fugitive emission test is carried out according to above mentioned requirements.

1.7.1 Preliminary tests at room temperature

The valve was pressurized with test fluid Helium to 41.4MPa according to manufacturer's requirements in the partly opened position, the temperature is measured and recorded as room temperature.

The test results are as follows and details can be seen in the annex:

Test results of preliminary tests

Item	Required Value	Actual Value
Leakage (mbar.l/s)	$\leq 2.51 \times 10^{-4}$	4.27×10^{-7}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.2 Mechanical cycle test at the room temperature

A total of 50 mechanical cycles was performed on the test valve while it was kept pressurized under a differential pressure of 41.4MPa according to the manufacturer's requirements at room temperature.

The pressure should be improved and kept at 41.4MPa to measure the leakage, and then the leakage from the stem seal is measured with following results and details can be seen in the annex:

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar.l/s) after 50cycles	$\leq 2.51 \times 10^{-4}$	6.89×10^{-7}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.3 Static tests at the selected test temperature

The test valve was held at room temperature. The test valve was kept pressure with 41.4MPa according to manufacturer's requirements. The leakage from the stem seal was measured with following results:

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar.l/s)	$\leq 2.51 \times 10^{-4}$	6.20×10^{-7}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.4 Mechanical cycle test at the selected test temperature

A total of 50 mechanical cycles was performed on the test valve while it was kept pressurized under a differential pressure of 41.4MPa according to the manufacturer's requirements at room temperature.

The leakage from the stem seal was measured with following results:

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar.l/s) after 50cycles	$\leq 2.51 \times 10^{-4}$	7.30×10^{-7}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.5 Intermediate static test at room temperature

The test valve was held at room temperature. The test valve was kept pressure with 41.4MPa according to manufacturer's requirements. The leakage from the stem seal was measured with following results :



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Test results of final tests

Item	Required value	Actual Value
Leakage (mbar•l/s)	$\leq 2.51 \times 10^{-4}$	7.55×10^{-7}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.6 Repeat of mechanical cycle test at the room temperature

A total of 50 mechanical cycles was performed on the test valve while it was kept pressurized with 41.4MPa according to the manufacturer's requirements at room temperature. The leakage from the stem seal is measured with following results:

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar•l/s) after 50cycles	$\leq 2.51 \times 10^{-4}$	7.77×10^{-7}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.7 Repeat static tests at the selected test temperature

The test valve was held at room temperature. The test valve was kept pressure with 41.4MPa according to manufacturer's requirements. The leakage from the stem seal was measured with following results.

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar•l/s)	$\leq 2.51 \times 10^{-4}$	7.82×10^{-7}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.8 Repeat mechanical cycle test at the selected test temperature

A total of 50 mechanical cycles was performed on the test valve while it was kept pressurized under a differential pressure of 41.4MPa according to the manufacturer's requirements at room temperature. The leakage from the stem seal was measured with following results:

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar•l/s) after 50cycles	$\leq 2.51 \times 10^{-4}$	3.14×10^{-6}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.9 Intermediate static test at room temperature

The test valve was held at room temperature. The test valve was kept pressure with 41.4MPa according to manufacturer's requirements. The leakage from the stem seal was measured with following results:

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar•l/s)	$\leq 2.51 \times 10^{-4}$	3.46×10^{-6}
The test results meet the requirement of VDI2440 Nov.2000.		

1.7.10 Final test at room temperature

A total of 5 mechanical cycles was performed on the test valve while it was kept pressurized under a differential pressure of 41.4MPa according to manufacturer's requirements, the leakage from the stem seal is measured with following results:

Test results of final tests

Item	Required value	Actual Value
Leakage (mbar•l/s) after 50cycles	$\leq 2.51 \times 10^{-4}$	4.12×10^{-6}
The test results meet the requirement of VDI2440 Nov.2000.		



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1.7.3 Post test examination

After all the above tests completed, the test valve was disassembled and all sealing components visually examined. It is found that no notable wear and any other significant observations.

We, hereby declare that the inspector has checked test valve and witnessed the fugitive emission test on the tested valve. The test results are as mentioned in this report.

Annex:

Annex 1: Copy of Drawing No.: 6L32-FX8FN8-11;

Annex 2: Test Report of Fugitive Emission Test No. HCT2025VB08062-2

Inspected by: Wang Zhongxiang

Signature:

Wang Zhongxiang

Date of issue: May.28.2025

