Dr.-Ing. T. Bäumer
Prüflabor - Ingenieurbüro - Prüfstände

TEADIT International Prod. GmbH
Europastr. 12

A – 6322 Kirchbichl

TEST Report

Flame - resistance tests according to ISO 19921
Report IBB 2480

This report confirms the testing of a representative flange seal in compliance with ISO 19921, 2005.

Manufacturer	TEADIT International Prod. GmbH Europastr. 12 A – 6322 Kirchbichl
Test Sample	Flange seal: TEADIT type NA-1005 107 mm x 61 mm x 1,5 mm Nominal bore: DN 50 (Test) Pressure rating: PN 40 Article No.: Aramid fiber / NBR
Date of Testing	09 March 2021
Test Report	3 pages
Testing location	Laboratory of Dr.-Ing. T. Bäumer GmbH, Altensenner Weg 75, D - 32052 Herford
Test requirements	The tests were carried out strictly in accordance with ISO 19921, 2005.
Participants	Mr. Dr. T. Bäumer Dr.-Ing. T. Bäumer GmbH

Test examination

The test sample was subjected to fire for 30 minutes at a temperature of 800°C (+/- 50°C), while water circulated inside the sample at a pressure of 5 barg (+/- 0,2 bar). The temperature of the water at the inlet was 80 °C (+/- 2 °C) and at the outlet max. 85 °C. The flames were created by gas burners. After the flame application the sample was subjected to a pressure of 1,5 times of nominal pressure for 5 minutes.

Instrumentation

Temperature: 3 Thermocouples, Ni Cr Ni, accuracy 1 K.
Pressure: Pressure transmitter, accuracy 0,5 %.
PC-system: AD converter board, software for measuring, Personal Computer

The measuring devices are controlled by an accredited calibration service.

Test results

Time of test start (ignition of burners): 02.05 pm

Temperatures and pressure during burn period

Time	**p**	**T_1**	**T_2**	**T_{Fire1}**
[s]	[barg]	[^oC]	[^oC]	[^oC]
.0	4.9	78.2	78.5	778.9
120.0	4.9	79.5	80.3	823.3
240.0	4.9	80.7	81.7	790.9
360.0	5.0	81.3	82.4	765.5
480.0	5.0	81.5	82.6	771.3
600.0	5.1	81.7	82.8	802.1
720.0	5.0	79.7	80.7	790.6
840.0	5.0	80.0	81.1	818.6
960.0	5.1	80.2	81.3	825.6
1080.0	5.0	80.5	81.6	789.7
1200.0	5.0	80.7	81.8	805.0
1320.0	5.1	81.0	82.1	819.2
1440.0	5.1	81.1	82.2	806.9
1560.0	5.0	81.4	82.6	792.7
1680.0	5.0	81.5	82.6	774.2
1800.0	5.0	81.6	82.7	799.5

Gas consumption (Propan): m = 4,2 kg

Proof pressure after flame application: p = 60 barg

Volumetric flow rate of water: V = 4,9 m^3/h

Comments on the results

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Conclusion

The test sample fulfilled the test requirements according to ISO 19921, 2005.
No leakages were observed during the test.

Herford, 09 March 2021

Dr.-Ing. T. Bäumer
GmbH

Mr. Dr. T. Bäumer
Consultant engineer