

Dr.-Ing. T. Bäumer GmbH - Altensenner Weg 75 - D - 32052 Herford

Gambit Lubawka Sp. z o.o.  
ul. Wojska Polskiego 16

PI – 58-420 Lubawka

## Test Report

### Flame resistance test according to DIN EN ISO 19921

Test-Report: IBB-3262

This report confirms the **successful** testing of a representative test sample in compliance with the DIN EN ISO 19921.

<b>Manufacturer</b>	Gambit Lubawka Sp. z o.o. ul. Wojska Polskiego 16 PI – 58-420 Lubawka
<b>Test Fitting</b>	Gasket Gambit AF-GL DN 50 PN 16 Nominal bore: DN 50 (Test) Pressure rating: PN 16
<b>Date of Testing</b>	22. July 2024
<b>Testing location</b>	Dr.-Ing. T. Bäumer GmbH, Laboratory Altensenner Weg 75 D - 32052 Herford
<b>Test requirements</b>	The tests were carried out in accordance with DIN EN ISO 19921.
<b>Participants</b>	Mr. Dr. T. Bäumer    Dr.-Ing. T. Bäumer GmbH

## Test examination

The gasket was mounted between two flanges (torque of screws ca. 165 Nm) and 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 bar (+/- 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 arranged according to DIN EN ISO 19921. 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: 1 Pressure transmitter, accuracy 0,5 %.

PC-system: AD converter board, software for measuring, Personal Computer

The measuring devices are supervised by an accredited calibration service.

## Test results

Time of test start (ignition of burners): 00.30 pm

Temperatures and pressure during burn period

Time [s]	p [barg]	T <sub>1</sub> [°C]	T <sub>2</sub> [°C]	T <sub>Fire1</sub> [°C]
.0	5.0	78.3	78.4	773.3
120.0	5.1	80.5	81.1	783.1
240.0	5.0	81.4	82.1	820.3
360.0	5.0	81.2	81.9	812.7
480.0	5.1	81.0	81.8	828.4
600.0	5.1	81.0	81.8	818.6
720.0	5.0	80.8	81.7	816.4
840.0	5.0	80.6	81.6	836.8
960.0	5.1	80.6	81.4	798.3
1080.0	5.0	80.9	81.5	806.0
1200.0	5.0	81.3	81.6	766.0
1320.0	5.0	81.0	81.6	786.8
1440.0	4.9	80.6	81.3	795.3
1560.0	5.0	80.4	81.2	815.3
1680.0	5.1	81.1	81.5	788.3
1800.0	5.0	81.3	81.7	802.6

**Gas consumption (Propan):**  $m = 2,5 \text{ kg}$

**Proof pressure after flame application:**  $p = 24 \text{ barg}$

**Volumetric flow rate of water:**  $V = 4,3 \text{ m}^3/\text{h}$

## 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, 22 July 2024

Dr.-Ing. T. Bäumer  
GmbH



Mr. Dr. T. Bäumer  
Consultant engineer