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# (1) EU-TYPE EXAMINATION CERTIFICATE

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres Directive 2014/34/EU
- (3) EU-Type Examination Certificate Number: ICQC 17 ATEX 0404 X
- (4) Equipment: Moisture analyzer "FAS" models FAS-W and FAS-HC
- (5) Manufacturer: Limited Liability Company «Scientific Production Assosiation «Vympel»
- (6) Address: Shkolny proezd 11, Dedovsk city, Istrinsky district, Moscow region, 143530
  Russian Federation
- (7) This equipment and any acceptable variation, also documents which are specified in the schedule to this certificate.
- (8) The certification body ICQC, notified body No. 2549 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

  The examination and test results are recorded in confidential report no 404/2017/08/ATEX
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN 60079-0:2012. EN 60079-1:2014
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EU-Type Examination Certificate relates only to the design and the construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture and supply of this equipment. These are not covered by the certificate
- (12) The marking of the equipment or protective system shall include the following:

⟨E<sub>X</sub>⟩ II 2G Ex db IIC T5 Gb -40 °C ≤Ta≤+60 °C

Director of Certification:



Sergey Kovalev

Date of issue: 15 December 2017 Jurmala, Latvia

# (13) SCHEDULE

# (14) to EU-TYPE EXAMINATION CERTIFICATE: ICQC 17 ATEX 0404 X

## (15) Description of Equipment:

The moisture analyzer «FAS» (further, «analyzer», «device») is an automatic condensation hygrometer operating on the principle of a chilled mirror. The analyzer has two modifications: "FAS-W" and "FAS-HC" that do not differ in Ex-design and maximum operating pressure, but do differ with regard to measurement parameters and delivery contents.

The device consists of a measurement cell, the flameproof housing with the screw cap and the electronics unit built inside.

The power supply of the device from an external power source as well as communication with external telecommunication systems are provided by the cables through three cable entries with the cable glands (one main and two additional ones) to the terminal block located under the housing cover.

Fastening the device to the gas inlet is carried out by means of eight fastening bolts M8x20. This connection ensures the seal of the analyzer: the gas delivery elements and the chamber of the measurement cell under the maximum pressure of the medium being measured.

Thermometer, photodetectors and mirror module with a thermoelectronic battery are located in a non-explosive zone, in the chamber of the measurement cell.

## Technical parameters:

Parameters	Value
Power supply	20 27 V, DC
Power consumption	no more than 15 W
Maximum operating pressure (pressure of the measured medium)	no more than 10 MPa
Ambient temperature	-40°C≤Ta≤+60°C
Temperature of the medium being measured	-40°C≤Tm≤+60°C
Enclosure protection rating	IP67

#### (16) Descriptive Documents:

VMPL2.848.008 TS Technical specifications VMPL2.848.008 OM and VMPL2.848.008-01 OM Operation manual

The drawings are listed in Evaluation report No: 404/2017/08/ATEX

#### (17) Specific conditions of use:

17.1. To ensure the safety requirements and explosion protection of the moisture analyzer «FAS», the installation, electrical connection and operation of the device should be carried out in accordance with the operating manuals VMPL2.848.008 OM and VMPL2.848.008-01 OM.

17.2. Fastening of the moisture analyzer «FAS» to the gas inlet should be carried out with by means of bolts M8x25c with tensile strength not less than 830 MPa

17.3. Before the energizing the moisture analyzer "FAS", it is necessary to purge the measurement cell chamber with the sample gas at a gas flow rate of 0.4 ... 0.7 dm<sup>3</sup> / min for at least 5 minutes to remove the explosive mixture.

It is forbidden to energize the analyzer without purging the measuring cell chamber.

17.4. Cleaning the mirror of the measuring cell should be carried out only outside the hazardous area.

#### (18) Essential Health and Safety Requirements:

Met by compliance with the standards mentioned in clause (9).