

# EC-Type Examination Certificate

- [2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC
- [3] EC-Type Examination Certificate Number: Presafe 15 ATEX 7611X Issue 0
- [4] Equipment or Protective System: Laser Gas II SP monitor, SP Compact
- [5] Applicant – Manufacturer or Authorized representative: NEO Monitors AS
- [6] Address: Prost Stabels vei 22  
2019 Skedsmokorset  
Norway
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV Nemko Presafe AS, notified body number 2460 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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 reports listed in section 14.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN 60079-0:2012, EN 60079-2:2007, EN 60079-28:2008, EN 61241-4:2004
- [10] If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to specific conditions for safe use specified in the schedule to this certificate.
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following:



II 2 G see Ex code, page 2  
II 2 D

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Bjørn Spongsveen  
For DNV Nemko Presafe AS  
Information on electronic signature [www.presafe.com](http://www.presafe.com)



Date of issue: 2015-12-18

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[13]

## Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No.: Presafe 15 ATEX6408 X Issue 0

### Certificate History

| Issue | Description    | Report no. | Issue date |
|-------|----------------|------------|------------|
| 0     | Original issue | D0001177   | 2015-12-18 |

[15] Description of Equipment or Protective System

The LaserGas Monitor is an optical instrument based on transmitting infrared laser light from a transmitter unit on one side of the stack to a receiver unit in the diametrically opposite side of the stack. The measurement principle is called infrared single-line absorption spectroscopy.

Safety system not part of the assessment.

| Type Identification | Ex code   | Ambient Temperature |
|---------------------|---|---------------------|
| LaserGas II SP      | Ex px [op is Ga] IIC T5 Gb<br>Ex pD [op is Ga] 21 IP66 T100°C | -20°C ≤ Ta ≤ +55°C  |

### Electrical Data

U=18 to 36VDC

### Degrees of protection (IP Code)

IP 66/67

### Routine tests:

Leakage test shall be performed according to clause 16.3 EN 60079-2:2007

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16] Project No.: D00001177

## Descriptive Documents

| Title:  | Drawing No.:       | Sheets       | Rev. Level: | Date:      |       |   |   |            |
|---|--------------------|--------------|-------------|------------|-------|---|---|------------|
| BOM, Receiving Unit   | 13282A             |              | A           | 2004-10-27 |       |   |   |            |
| AuxBoard  | 12932              | 2            | 0           | 2003-01-23 |       |   |   |            |
| With alignment and purging unit , LaserGas II SP Ex version(Ex p for zone 1, Ex n for Zone 2) Sheet :1/7      | 13778B             | 7            | B           | 2005-08-03 |       |   |   |            |
| Transmitter Unit LaserGas II SP Ex version(Ex p for zone 1, Ex n for Zone 2) Sheet :2/7                       |                    |              |             |            |       |   |   |            |
| Receiver Unit LaserGas II SP Ex version(Ex p for zone 1, Ex n for Zone 2) Sheet : 3/7                         |                    |              |             |            |       |   |   |            |
| Power Supply Unit, LaserGas II SP Ex version(Ex p for zone 1, Ex n for Zone 2) Sheet : 4/7                    |                    |              |             |            |       |   |   |            |
| Alignment and purging unit DN50/PN10, LaserGas II SP Ex version(Ex p for zone 1, Ex n for Zone 2) Sheet : 5/7 |                    |              |             |            |       |   |   |            |
| Electrical diagram trasmitter, LaserGas II SP Ex version(Ex p for zone 1, Ex n for Zone 2) Sheet : 6/7        |                    |              |             |            |       |   |   |            |
| Electrical diagram receiver, LaserGas II SP Ex version(Ex p for zone 1, Ex n for Zone 2) Sheet : 7/7          |                    |              |             |            |       |   |   |            |
| ATEX gasket information, Transmitter Laser Gas II Sheet 1/2   |                    |              |             |            | 17373 | 2 | - | 2014-06-06 |
| ATEX gasket information, Receier Laser Gas II Sheet 2/2   |                    |              |             |            |       |   |   |            |
| Mainboard-E   | Assy No :<br>12945 | 12<br>sheets | F           | 2012-09-11 |       |   |   |            |
|   | PCB No :<br>12944  |              | E           |            |       |   |   |            |

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## [17] Specific Conditions of Use

- The monitoring device of the pressurization, consisting at least of the control, the pressure resp. flow monitoring and the protective gas distribution, has to be tested with regard to the function of the monitoring device according to the requirements of the section 7 of the EN 60079-2 concerning the function of the monitoring device.
- The monitoring device of the pressurization has to be set at least with due observation of the data fixed in the Examination Certificate for the disconnection of the LaserGas Monitor or connection of a warning signal in case of the fixed minimum excess pressure for the protective gas has fallen below, - examination of the leakage loss rate,
- - the minimum volumetric flow of protective gas during purging.
- If not already embodied into the pressurization control system, a safety device limiting the pressure to the specified maximum overpressure of the equipment must be mounted.
- The equipment contains a 3V lithium cell. Do not open equipment when an explosive atmosphere may be present

## [18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE