(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

EPS 20 ATEX 1 136 X **Revision 0**

(4) Equipment: Leak detector type GLD 20x

(5) Manufacturer: Gottsberg Leak Detection GmbH & Co. KG

(6) Address: Am Knick 20
22113 Oststeinbek
Germany

(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of 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 of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 19TH0361.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

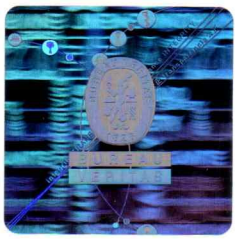
EN IEC 60079-0:2018 **EN 60079-11:2012**

(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 annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 1G Ex ia IIB T3 Ga



ZERTIFIZIERUNGSSTELLE BUREAU VERITAS 1828 Bureau Veritas CPS Germany GmbH

Certification department of explosion protection

Ulrich Feike

Tuerkheim, 2022-12-19

(13) # Annex

(14) **EU - Type Examination Certificate EPS 20 ATEX 1 136 X** **Revision 0**

(15) Description of equipment:

The leak detector type GLD 20x is intended for monitoring the tightness and determining the location of leaks in pipelines. It has an internal sound transducer and an internal pressure sensor. Furthermore, the leak detector type GLD20x has an externally accessible connector which is used for charging and data transmission outside the hazardous area as well as for connecting the passive odometer sensors of the carrier type GLD30x. From a purely electrical point of view, these odometers consist only of cables and reed switches. The magnetic switch (reed switch) is closed by the magnet installed in the wheel when it is rotated accordingly. Reed switch signals are received as input signals in the form of pulses.

The leak detector type GLD 20x is intended for use in the pig trap (category 1, gas group IIB and temperature class T3) and in pipelines (no explosive atmosphere).

The leak detector type GLD20x is intended only for installation in carrier of the manufacturer of the type GLD 30x intended for this purpose. Together, the leak detector and the carrier make up the leak detection pig. This pig does not have its own drive unit. The pumped medium provides the propulsion.

The preparation of the leak detector type GLD20x and the installation in a carrier type GLD30x is always carried out outside the hazardous area (no Ex-zone). The further operating procedure provides for transport of the device to the pipeline, into which the pig is inserted, for example, via a pig trap. After closing and flooding the pig trap, the run begins and ends in a receiving trap. After removal of the leak detection pig, the leak detector type GLD20x and the carrier type GLD30x are cleaned outside the hazardous area (no Ex-zone) and then disassembled from the carrier.

The post-processing or data transfer from the leak detector type GLD20x as well as the charging of the internal energy storage device always takes place outside the explosive area. Only the associated charger of the manufacturer type GLD407 may be used as charging and communication device.

Permissible maximum ambient temperature or medium temperature range:

0 °C to +50 °C or -20 °C to +85 °C depending on the version according to the information on the type plate.

Type description:

GLD 20x - Gottsberg Leak Detection - Leak Detector
GLD 203 - optimized for gas application
GLD 204 - optimized for liquid application
GLD 205 - optimized for both applications

Technical Data:

Maximum allowable pressure inside the pipeline: 150 bar

Supply via an internal nickel-metal-hydride secondary battery consisting of two blocks of 4 cells each in parallel connection

Different types of cells are used, depending on the target temperature range

Charging circuit:	only for connection to the associated charger of the manufacturer type GLD 407 and only outside the hazardous area via the plug provided for this purpose. The permissible ambient temperature range during charging is 0 °C to +30 °C.
Odometer circuit:	in type of protection intrinsic safety Ex ia IIB only for connection to the associated carrier type GLD30x with the EU type examination certificate EPS 22 ATEX 2 029 X or the EC type examination certificate TÜV 08 ATEX 554661 X via the plug provided for this purpose.

Annex to EU - Type Examination Certificate EPS 20 ATEX 1 136 X **Revision 0**

(16) Reference number: 19TH0361

(17) Special conditions for safe use:

1. Outside atmospheric conditions (0.8 - 1.1 bar), operation in pipelines up to the maximum pressure of 150 bar is permissible if no explosive gas mixtures are present.
2. Before insertion into the pig trap and during removal from the pig trap, the leak detection pig, consisting of GLD30x and GLD20x, must be securely connected to the local potential equalization.
3. The internal batteries may only be charged outside the explosion hazard area and only with the associated charger of the manufacturer, type GLD407. The permissible ambient temperature range during charging is 0°C to +30°C.
4. The leak detector type GLD20x may only be operated with an associated carrier of the type GLD30x with the EU type examination certificate EPS 22 ATEX 2 029 X or the EC type examination certificate TÜV 08 ATEX 554661 X
5. Depending on the version, the respective maximum permissible ambient and medium temperature range must be observed. It is either 0 °C to 50 °C or -20 °C to +85 °C and can be found on the type plate.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Tuerkheim, 2022-12-19

Ulrich Feike