Translation

(1) # 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

TÜV 01 ATEX 1772 X

(4) Equipment: Level gauge type TORRIX

(5) Manufacturer: FAFNIR GmbH

(6) Address: Bahrenfelder Strasse 19
D-22765 Hamburg

(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) The TÜV Hannover/Sachsen-Anhalt e.V., TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), 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 the confidential report N° 01YEX134090.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014: 1997 **EN 50 020: 1994** **EN 50 284:1999**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special 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 protective system according to Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and placing on the market of this equipment or protective system.

(12) The marking of the equipment or protective system must include the following:

Ex II 1/2 G EEx ia IIC T6, T5, T4, T3, T2

TÜV Hannover/Sachsen-Anhalt e.V.
TÜV CERT-Zertifizierungsstelle
Am TÜV 1
D-30519 Hannover

Head of the Certification Body

Hanover, 2001-12-19

TÜV NORD CERT

(13) **SCHEDULE**

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 01 ATEX 1772 X**

(15) Description of equipment

The level gauge type TORRIX consists of a housing with the evaluating electronics, the sensor, the tube and float. The tube with the float is placed within the liquid. A permanent magnet, situated in the float, twists the sensor - a magnetostrictive wire. The evaluating electronics calculate the filling level from the running times of this mechanical shaft. The level gauge has to be supplied with intrinsically safe circuits.
The connection between the temperature code, the permitted ambient temperature (T_a) and the admissible liquid temperature (T_F), can be taken from the following tables:

Hazardous areas which require electrical apparatus of the category 1 / 2

Temperature code	T_a	T_F
T6	-20 °C to 40 °C	up to 60 °C
T5	-20 °C to 55 °C	up to 60 °C
T4	-20 °C to 85 °C	up to 60 °C
T3	-20 °C to 85 °C	up to 60 °C
T2	-20 °C to 85 °C	up to 60 °C

Hazardous areas which require electrical apparatus of the category 2

Temperature code	T_a	T_F
T6	-20 °C to 40 °C	up to 85 °C
T5	-20 °C to 55 °C	up to 100 °C
T4	-20 °C to 85 °C	up to 135 °C
T3	-20 °C to 85 °C	up to 200 °C
T2	-20 °C to 85 °C	up to 250 °C

Electrical Data

Signal- and supplier circuits (terminal +, -) in the kind of protection Intrinsic Safety EEx ia IIC only for the connecting at intrinsically circuits with a separate certificate with the following maximum values:

U_i = 30 V
I_i = 200 mA
P_i = 1 W
L_i = 250 µH
C_i = 5 nF

(16) Test documents are listed in the test report No.: 01 YEX 134 090.

(17) Special conditions for safe use

1. If titanium floats are used, care must be taken during the installation and the operation that these floats cannot cause any frictional and impact sparks.

2. The level gauge isn't signed with the permitted ambient temperature and the liquid temperature. The relation between the temperature code, the permitted ambient temperature (T_a) and the permitted liquid temperature (T_F) shows the above tables or the operation manual.

(18) Essential Health and Safety Requirements

No additional ones