DET NORSKE VERITAS

EC-TYPE EXAMINATION CERTIFICATE

[2] EQUIPMENT OR PROTECTED SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC

[3] EC-Type Examination Certificate Number: **DNV-2004-OSL-ATEX-0115**

[4] Equipment or Protective System: **TNXCC Flameproof enclosure**

[5] Applicant – Manufacturer or Authorized representative: **Technor AS**

[6] Address: **Dusavikveien 39, P.O.Box 658, 4001 Stavanger 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, notified body number 0575 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 report no. : **2006-3024**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 + A1: 1999 + A2: 1999, EN 50018: 2000 + A1: 2002, EN 50019: 2002 and EN 50281-1-1: 1998 + A1: 2002

[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 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/D EEx d IIC/IIB or EEx de IIC/IIB

Høvik, 2006-01-12
for Det Norske Veritas Certification AS

Line Gangeskar
Head of Section

Håkon S. Håkonsen
Senior Engineer

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV-2004-OSL-ATEX-0115

[15] **Description of Equipment or Protective System**

TNXCC is a stainless steel flameproof enclosure with a cylindrical shape. TNXCC 100 can also be made of aluminium. The enclosure may be used with glass window, dome or stainless steel top sections.

The certification of the enclosure is based upon technical specifications in certificate for TNXCD, DNV-2003-OSL-ATEX-0436U.

Type Identification

TNXCC D – L (diameter and length of Ex d enclosure see table below)

Type	Dimensions to be considered as the maximum size for the diameter of d/de enclosure, smaller dimentions are allowed	Dimensions to be considered as the maximum size for the length of d/de enclosure, smaller dimentions are allowed
TNXCC 100	101 mm	360 mm
TNXCC 130	132 mm	360 mm
TNXCC 195	196 mm	290 mm

Maximum ambient temperatures for the top sections that can be used

Top section	Temperature range
Dome R23	-50°C to + 60°C
Up to Dome R69	-20°C to + 60°C
Glass window	-50°C to + 60°C
Stainless steel end cover	-50°C to + 60°C

The ex-code will vary based on the components used. The flameproof enclosure may be equipped with cable glands, bushings, Ex-e components in the wall and intrinsically safe power supplies. A TNCN/TNCC/TNUP/TNUC or any other certified junction box may be used for indirect cable entry. This junction box may be equipped with Ex-d, e, m and ia/ib components. The Ex-code may vary as follows:

EEx	d	e	m	ia/ib	[ia/ib]	IIB/IIC	T6-T4	
								Temperature class measured on the flameproof enclosure, or based on components.
								Gas group IIC on the enclosure. May be IIB caused by components.
								IS outputs from the Ex-d enclosure
								IS components in the Ex-e enclosure
								Moulded components in the Ex-e enclosure
								TNCN/TNCC Ex-e junction box, and components in this enclosure
								Flameproof enclosure, and components mounted on this enclosure and in the Ex-e junction box

Routine Test(s)
The overpressure test was performed with 4 times reference pressure and the routine test is not necessary.
Tested at 45,4 bar.

Electrical Data

- Max 1000 volt
- Temperature class will be based upon internal load, when Ex-i components are mounted temperature test to be performed or termostate to be mounted.

Degrees of protection (IP Code)
IP 66, IP 67 and IP 68 (0,5 bar 2 hours)

[16] **Report No.:** 2006-3024
Project No.: 42035265

Descriptive Documents

Number	Title	Rev.	Date
XCC-12-5	Label for TNXCC... Atex certification	C	2004-08-24
XCC-13-5	Label for TNXCC / TNXAC Complete certificate	B	2004-08-24
XCC-19-4	General certification drawing TNXCC	A	2006-07-08
XCD-90-2	Arrangement drawing TNXCD 155 with internal arrangement	A	2005-10-20

[17] **Special Conditions for Safe Use**
For IIC enclosures not more than 60% of the cross-sectional area shall be used if not otherwise mentioned in descriptive documents. For IIA or IIB enclosures not more than 80% of the cross-sectional area shall be used if not otherwise mentioned in descriptive documents.

For dust applications (Ex II 2 D) the following apply:

- The minimum IP rating of all external components must be IP6X.
- The maximum surface temperature shall be marked as a temperature value.
- Drawing no. XCD-54-4 listed in DNV-2003-OSL-ATEX-0436U is not applicable for dust applications, because surface area of the conical dome is larger than 400 cm^2 (According to EN 50281-1-1: 1998 + A1: 2002)

[18] **Essential Health and Safety Requirements**
See part 9 of this certificate

END OF CERTIFICATE

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