



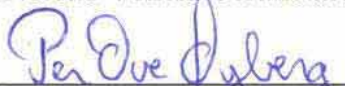
DET NORSKE VERITAS

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-2003-OSL-ATEX-0135**
- [4] Equipment or Protective System: **Flameproof Enclosure, TNCD**
- [5] Applicant – Manufacturer or Authorized representative: **Technor ASA**
- [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.: **2003-3293**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: **EN 50014: 1997 + A1: 1999 + A2: 1999 and EN 50018:2000**
- [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 or II 2(1/2)G** Ex code, see schedule

Høvik, 15 August 2003
for Det Norske Veritas Certification AS


Per Ove Øyberg
Head of Section




Bjørn Spongsveen
Senior Engineer

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

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



[13]

Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV-2003-OSL-ATEX-0135

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

The TNCD Enclosure is a complete assembly for termination, control and signalling devices and comprises of a stainless steel enclosure in various sizes up to max 570x570x380 mm. After the installation of the equipment, the manufacturer will verify the temperature class.

The certification of the enclosure is based upon technical specifications in certificate for TNCD, Nemko 03 ATEX 263U.

Type designation:

TN	CD	XX	XX	XX	
					Dimension of box, depth in cm.
					Dimension of box, height in cm.
					Dimension of box, width in cm.
					Material: CD = stainless steel
					Manufacturer, Technor ASA

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

EEx	d	c	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

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$T_{amb} = -40^{\circ}\text{C}$ to $+60^{\circ}\text{C}$

Degree of protection of enclosures: IP66.

[16] **Report No.:** 2003-3293
Project No.: 420 35237

Descriptive Documents

Number	Title	Rev.	Date
53-CNX-5	Procedure for temperature testing	A	10.03.03
CDX-78-5	Type label for TNCD	A	11.06.03
50-CDX-5	User manual TNCD Enclosure	A	16.06.03
51-CDX-5	List of complete enclosures TNCD		

[17] **Special Conditions for Safe Use**
NA

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

END OF CERTIFICATE





Supplement 1 to EC Type Examination Certificate Number : DNV-2003-OSL-ATEX-0135

The certificate is extended to include the use of the combination TNCD / TNCC in dust atmospheres. The enclosures satisfy the requirements of EN50281-1-1, protection by enclosures.

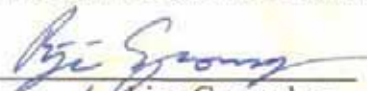
The enclosure shall have the following additional marking:

 II 2 D T 135°C

File: 42035315

Report: 2003-3501

Høvik, 2003-12-19
for Det Norske Veritas Certification AS


Line Gangeskar
Head of Section




Bjørn Spongsveen
Service Responsible ATEX


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Supplement 2 to EC Type Examination Certificate Number: DNV-2003-OSL-ATEX-0135

The certificate is extended to include the use of the TNCD enclosure in group I category M2 areas.

The enclosure shall have the following additional marking:

 I M2 EEx d[ia] I T85°C

Descriptive Documents

Number	Title	Rev.	Date
504562-01-1	G.A. Drawing w/partslst TNCD 385727	B	2205-11-17

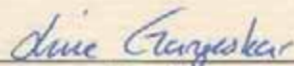
The variations described in the listed document are included in this certificate:

Descriptive Documents

Number	Title	Rev.	Date
51-CDX-5	Document list TNCD	A	2005-12-20

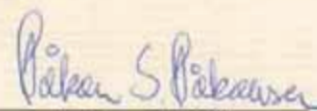
File: 42210370
Report: 2003-3293 rev. 02

Høvik, 2005-12-22
for Det Norske Veritas Certification AS



Line Gangeskar
Head of Section





Håkon S. Håkonsen
Senior Engineer

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for the proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.