

(2) **Equipment and protection systems intended for use in potentially explosive atmospheres  
Directive 94/9/CE**

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(3) Number of the EC type examination certificate: **INERIS 00ATEX0021 X**

(4) Protection apparatus or system:

**ENCLOSURE TYPE EJB...**

(The type is completed by numbers and/or letters corresponding to manufacturing variation)

(5) Manufacturer: **ITALSMEA**

(6) Address: **Via per Cernusco, 15  
20060 BUSSERO (MI)  
ITALY**

(7) This protection system or equipment and any other acceptable alternative of this one are described in the annex of this certificate and the descriptive documents quoted in this annex.

(8) The INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/CE 23 the Mars 1994, certifies that this protection system or equipment fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protection systems intended for use in potentially explosive atmospheres, described in appendix II of the Directive.

The examinations and the tests are consigned in official report N°15443/00.

(9) The respect of the Essential Health and Safety Requirements is ensured by:


- conformity with:

EN 50 014            of June    1997  
EN 50 018            of August 1994  
EN 50 020            of August 1994  
EN 50 281-1-1       of September 1998

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protection system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

- (11) This EC type examination certificate refers only to the design and the construction of the apparatus or protection system specified. If necessary, other requirements of this Directive will be imposed on the manufacture and the supply of this apparatus or protection system.
- (12) The marking of the equipment or the protection system will have to contain:

 II 2 GD

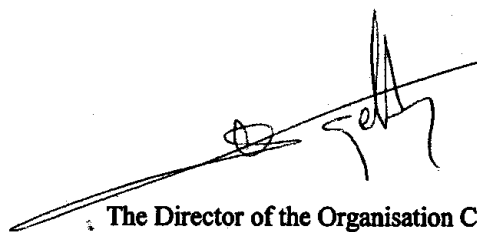
EEx d IIB T6 or T5 or T4 or EEx d [ia] IIB T6 or EEx d [ib] IIB T6

Verneuil-en-Halatte, 2000 11 15

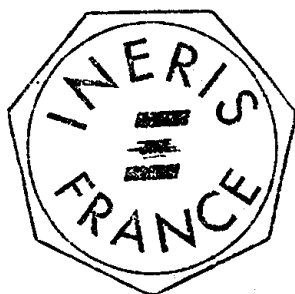


X. LEFEBVRE

Engineer at the Laboratory of Certification of  
Materials ATEX



The Director of the Organisation Certified,  
By delegation  
B. PIQUETTE  
Deputy manager of Certification



(13)

## ANNEX

(14)

EC TYPE EXAMINATION CERTIFICATE N° INERIS 00ATEX0021 X

(15)

### DESCRIPTION OF THE EQUIPMENT OR THE PROTECTION SYSTEM

Metallic enclosures of different sizes intended to contain equipment defined in technical note. These enclosures can be fitted with any control auxiliaries and lighting.

These enclosures can be fitted with drain and/or breather devices types ECR-1 and ECR-2. The cover can be move with hinges fixed on the body.

Enclosures present a degree of protection IP65 according to European standard EN 60 529.

Enclosures can be fitted with IS elements and None IS elements or only with IS elements. Different elements of intrinsic safety are defined in technical note and are of a certified type.

When boxes contain both IS and None IS elements, they are fitted with internal thermal probe.

Enclosures in EEx d variation, can be used at an ambient temperature lower than -20°C, (-30°C maxi).

Enclosures in EEx d[ia] or d[ib] variation, can be used at an ambient temperature lower than -20°C, (-25°C maxi).

### PARAMETERS RELATING TO THE SAFETY

For using in ambient temperatures inferior to -20°C (-30°C maxi), the manufacturing is previewed by the manufacturer under his responsibility.

Type test have been performed under ambient temperatures required by standards

Supply voltage : from 12 to 440 V(DC) or  
from 24 to 690 V(AC)  
Frequency : 50 / 60 Hz

Power of lamps fitting with signal lamps  
- 5 watts for incandescent lamps with T4 temperature class  
- 1 watt for LED

Power of anti moisture resistance :250W

Thermal probe characteristic :  
Limit of release : 50 °C ± 5°C.

Maximum dissipated powers:  
**EEx d enclosure for an ambient temperature of 40°C**

Box Type	Dissipated maximum power (W) according temperature class			
	T6	T5	T4	I max (A)
EJB 2 ; 3 ; 3A	30	40	60	50
EJB 4 ; 5	50	65	100	100
EJB 6	100	130	190	180
EJB 8 ; 9	180	230	350	260
EJB 10 ; 11	225	315	400	350
EJB 12	300	380	450	350
EJB 13	350	430	500	800
EJB 13A	400	480	530	800

**EEx d enclosure for an ambient temperature of 50°C**

Box Type	Dissipated maximum power (W) according temperature class			
	T6	T5	T4	I max (A)
EJB 2 ; 3 ; 3A	20	30	45	50
EJB 4 ; 5	35	45	75	100
EJB 6	75	95	140	180
EJB 8 ; 9	135	170	260	260
EJB 10 ; 11	165	235	300	350
EJB 12	225	285	335	350
EJB 13	260	320	375	800
EJB 13A	300	360	395	800

**EEx d enclosure for an ambient temperature of 55°C**

Box Type	Dissipated maximum power (W) according temperature class			
	T6	T5	T4	I max (A)
EJB 2 ; 3 ; 3A	15	25	35	50
EJB 4 ; 5	30	40	60	100
EJB 6	60	80	115	180
EJB 8 ; 9	110	140	210	260
EJB 10 ; 11	135	190	240	350
EJB 12	180	230	270	350
EJB 13	210	260	300	800
EJB 13A	240	290	320	800

**EEx d enclosure containing only terminals**

Terminal Section	Maximum Intensity (A)	Maximum number of terminals	Terminal Section	Maximum Intensity (A)	Maximum number of terminals
2,5 mm <sup>2</sup>	16 A	(*)	50 mm <sup>2</sup>	125 A	(*)
4 mm <sup>2</sup>	25 A	(*)	70 mm <sup>2</sup>	160 A	(*)
6 mm <sup>2</sup>	32 A	(*)	95 mm <sup>2</sup>	200 A	(*)
10 mm <sup>2</sup>	40 A	(*)	120 mm <sup>2</sup>	250 A	(*)
16 mm <sup>2</sup>	63 A	(*)	185 mm <sup>2</sup>	315 A	(*)
25 mm <sup>2</sup>	80 A	(*)	240 mm <sup>2</sup>	400 A	(*)
35 mm <sup>2</sup>	100 A	(*)			(*)

(\*) The maximum permitted number of terminals is a function of the maximum dissipated power in the enclosure; the powers are the suitable ones in tables above for EEx d variations.


**EEx d [ia] or [ib] enclosure for an ambient temperature of 40°C**

Box type	Power (W)	Maximum number of IS elements
	Class T6	
EJB 2 ; 3 ; 3A	25	4
EJB 4 ; 5	30	6
EJB 6	50	8
EJB 8 ; 9	80	8
EJB 10 ; 11	140	10
EJB 12	200	12
EJB 13	260	20
EJB 13A	360	20

**MARKING**

Marking must be readable and indelible; it must comprise the following indications:

A) Enclosure without intrinsic safety element :

- **ITALSMEA**  
Via per Cernusco, 15  
20060 BUSSERO (MI)  
ITALY
- EJB ... (1)
- INERIS 00ATEX0021 X
- (Serial number, if any)
- (year of construction)
-  **II 2 GD**
- EEx d IIB (\*)
- T.Amb : (\*\*)
- (\*\*\*)
- (\*\*\*\*)
- DO NOT OPEN WHEN ENERGIZED

(1) Type is completed by numbers and/or letters corresponding to manufacturing variation.

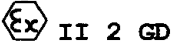
**for use in explosive gas atmospheres**

- (\*) T6 or T5 or T4
- (\*\*) -30°C to 40°C or -30°C to 50°C or -30°C to 55°C
- (\*\*\*\*) T.cable : 90°C for temperature class T4

**for use in explosive dust atmospheres**

- (\*) T85°C or T100°C or T135°C
- (\*\*) -30°C to 40°C or -30°C to 50°C or -30°C to 55°C
- (\*\*\*) IP65
- (\*\*\*\*) T.cable : 90°C for T135°C

**B) Enclosures with intrinsic safety elements :**

- **ITALSMEA**  
Via per Cernusco, 15  
20060 BUSSERO (MI)  
ITALY
- EJB ... (1)
- INERIS 00ATEX0021 X
- (Serial number, if any)
- (year of construction)
-  **II 2 GD**
- EEx d [\*] IIB (\*\*)
- (\*\*\*)
- DO NOT OPEN WHEN ENERGIZED

(1) Type is completed by numbers and/or letters corresponding to manufacturing variation.

**for use in explosive gas atmospheres**

- (\*) [ia] or [ib]
- (\*\*) T6

**for use in explosive dust atmospheres**

- (\*) [ia] or [ib]
- (\*\*) T85°C
- (\*\*\*) IP65

The whole of marking can be carried out in the language of the country of use.

The protection apparatus or system must also carry the marking normally envisaged by the standards of construction which relate to it.

**ROUTINE EXAMINATIONS AND TESTS**

Each example of the equipment hardware defined above must have successfully passed before delivery an overpressure test in accordance with section 16.1 of standard EN 50 018, of a period comprised between 10 and 60 seconds under :

- 11,5 bar for EJB2 to EJB 12
- 9 bar for EJB 13 and EJB 13A.

**(16) DESCRIPTIVE DOCUMENTS**

The technical report is composed of the documents quoted hereafter, constituting the descriptive file of the apparatus, object of this certificate.

- Official report N°15443/00 of the 2000.11.13
- Descriptive Notice TN-10-2000-01 (28 pages) signed on 2000.10.18
- Instruction Notice (5 pages) signed on 2000.10.18
- Plan n° C10200000 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C10200001 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C10200002 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C10200003 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C10200004 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C10200005 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C11200001 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C11200002 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C11200003 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C11200004 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C11200005 Rev 0 of 2000.02.02 signed on 2000.02.02
- Plan n° C11200006 Rev 0 of 2000.02.02 signed on 2000.02.02

**(17) SPECIAL CONDITIONS FOR SAFE USE**

The yield stress of the fastener elements of each part the flame proof casing must be at least equal to 780 N/mm<sup>2</sup>.

Enclosures EEx d variations are intended to be used in an ambient temperatures range of -30°C to 55°C.

Enclosures EEx d [ia] or EEx d [ib] variations are intended to be used in an ambient temperatures range of -25°C to 40°C.

User shall connect on intrinsic safety terminals only elements which maximum characteristics shall be below or equal to characteristics defined in technical note.

The interconnection of external circuit to this material shall be in accordance with intrinsic safety.

Enclosures containing None IS and IS shall be fitted with an internal probe switching off enclosure when thermal probe is at his rate i.e. 50°C± 5°C.

For use in potentially explosive atmospheres due to combustible dust:

- The surface of joint flanged gap between cover and body shall be covered with grease, for example silicone and cable entries shall be of a degree of protection at least IP6X.
- User shall perform a regular cleaning of enclosure to limit dust layers on enclosure sides.

These special conditions are defined in instruction notice.

**(18) ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH**

The respect of the Essential Health and Safety Requirements is ensured by:

- conformity to the European standards EN 50 014, EN 50 018, EN 50 020 and EN 50 281-1-1
- the whole of the provisions adopted by the manufacturer and described in the descriptive documents.