

# **INERIS**

INSTITUT NATIONAL DE L'ENVIRONNEMENT  
INDUSTRIEL ET DES RISQUES

Parc Technologique ALATA  
B.P. N°2 - 60550 Verneuil-en-Halatte - France  
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- (2) **Equipment and protective systems intended for use in potentially explosive atmospheres  
Directive 94/9/EC**

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

- (3) Number of the EC type examination certificate: **INERIS 02ATEX0072 X**

- (4) Protective system or equipment:

**ENCLOSURE TYPE GUB ./.-. or GUB-QL ./.-.**

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

- (5) Manufacturer: **YSEBAERT N.V**  
(6) Address: **Bisschoppenhoflaan, 583  
B-2100 ANTWERPEN -DEURNE**

- (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/EC of the 23<sup>rd</sup> March 1994, certifies that this protection system or equipment fulfils the Essential of 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°45147/02.

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


- conformity with:

EN 50 014	of June	1997 + A1 and A2
EN 50 018	of November	2000
EN 50 020	of August	1994
EN 50 281-1-1	of September	1998 + A1

- 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.

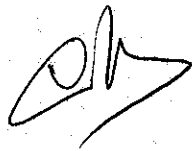
- (11) This EC type examination certificate refers only to the design and the construction of the apparatus or protection system specified. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system, these are not covered by this certificate.
- (12) The marking of the equipment or the protection system will have to contain:

 II 2 GD

EEEx d IIC T6 or T5 or T4 or EEx d [ia] IIC T6 or EEx d [ib] IIC T6

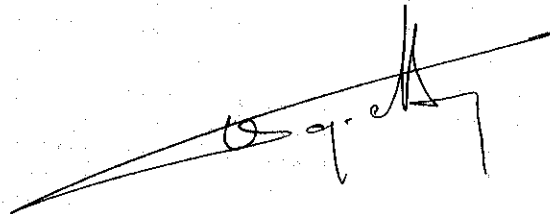
IP65 T85°C or T100°C or T135°C

Verneuil-en-Halatte, 2002 11 30



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 02ATEX0072 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.

Type GUB./.-. is made of a body closed by a screwed cover.

Type GUB-QL./.-. is made of a body closed by a flange maintained by a bushing threaded

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  $-20^{\circ}\text{C}$ , ( $-30^{\circ}\text{C}$  maxi).

Enclosures in EEx d[ia] or d[ib] variation, can be used at an ambient temperature lower than  $-20^{\circ}\text{C}$ , ( $-25^{\circ}\text{C}$  maxi).

### PARAMETERS RELATING TO THE SAFETY

For using in ambient temperatures inferior to  $-20^{\circ}\text{C}$  ( $-30^{\circ}\text{C}$  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 lamp with T4 temperature class  
 - 1 watt for LED

Power of anti moisture resistance : 50 W

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	I max (A)
GUB0	20	30	40
GUB01 or GUB-QL01	30	50	63
GUB02 or GUB-QL02	35	59	75
GUB03 or GUB-QL03	45	75	100
GUB04 or GUB-QL04	65	105	160
GUB05 or GUB-QL05	75	120	200
GUB06 or GUB-QL06	100	160	315

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

Box type	Dissipated maximum power (W) according temperature class		
	T6	T5	I max (A)
GUB0	15	24	40
GUB01 or GUB-QL01	24	40	63
GUB02 or GUB-QL02	28	47	75
GUB03 or GUB-QL03	35	60	100
GUB04 or GUB-QL04	52	84	160
GUB05 or GUB-QL05	60	95	200
GUB06 or GUB-QL06	80	128	315

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

Box type	Dissipated maximum power (W) according temperature class		
	T6	T5	I max (A)
GUB0	14	21	40
GUB01 or GUB-QL01	21	36	63
GUB02 or GUB-QL02	25	42	75
GUB03 or GUB-QL03	32	54	100
GUB04 or GUB-QL04	46	75	160
GUB05 or GUB-QL05	54	86	200
GUB06 or GUB-QL06	72	115	315

**EEx d enclosure containing only terminals**

Terminal Section	Maximum Intensity	Maximum number of terminals	Terminal Section	Maximum Intensity	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	(*)			
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] ou [ib] enclosure for an ambient temperature of 40°C**

Box type	Power (W) Class T6	Maximum number of IS elements
GUB0	20	2
GUB01 or GUB-QL01	30	3
GUB02 or GUB-QL02	35	3
GUB03 or GUB-QL03	45	4
GUB04 or GUB-QL04	65	5
GUB05 or GUB-QL05	75	6
GUB06 or GUB-QL06	100	8

**MARKING**

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

A) Enclosure without intrinsic safety element :

- **YSEBAERT N.V**  
Bisscoppenhoflaan, 583  
B-2100 ANTWERPEN -DEURNE
- GUB. / . - . or GUB-QL. / . - . (1)
- INERIS 02ATEX0072 X
- (Serial number)
- (year of construction)
-  II 2 GD
- EEx d IIC (\*)
- 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 when the enclosure is fitted with a light indicator with incandescent lamp 5 watts.

(\*\*) -30°C to 40°C or -30°C to 50°C or -30°C to 55°C

(\*\*\*\*) T.cable : 90°C for temperature class T5 and T4

**for use in explosive dust atmospheres**

(\*) T85°C or T100°C  
or T135°C when the enclosure is fitted with a light indicator with incandescent lamp 5 watts.

(\*\*) -30°C to 40°C or -30°C to 50°C or -30°C to 55°C

(\*\*\* ) IP65

(\*\*\*\*) T.cable : 90°C for T100°C and T135°C

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

**- YSEBAERT N.V**

Bisschoppenhoflaan, 583  
B-2100 ANTWERPEN -DEURNE

- GUB. / . - . or GUB-QL . / . - . (1)

- INERIS 02ATEX0072 X

- (Serial number)

- (year of construction)

-  II 2 GD

- EEx d [\*] IIC (\*\*)

- 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**

(\*) [ia] or [ib]

(\*\*) T6

(\*\*\* ) -25°C to 40°C

**for use in explosive dust atmospheres**

(\*) [ia] or [ib]

(\*\*) T85°C

(\*\*\* ) -25°C +40°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 12 bar.

#### **(16) DESCRIPTIVE DOCUMENTS**

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

- Descriptive notice TN-20-2002-01 (14 pages) of 2002.10.15
- Instruction notice (4 pages) of 2002.10.15
- Plan n° C20200000 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C20200001 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C20200002 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C20200003 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C20200004 Rev 0 of 2002.10.15 signed on 2002.10.15
- Plan n° C10200002 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C10200003 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C11200001 Rev 1 of 2002.06.27 signed on 2002.10.15
- Plan n° C11200002 Rev 1 of 2002.10.14 signed on 2002.10.15
- Plan n° C11200003 Rev 1 of 2002.06.27 signed on 2002.10.15
- Plan n° C11200004 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C11200005 Rev 0 of 2000.02.02 signed on 2002.10.15
- Plan n° C11200006 Rev 0 of 2000.02.02 signed on 2002.10.15

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

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 the spigot joint next to the flange of the cover in version GUB-QL./.-. and threading of the cover and the nut of flange blockage shall be covered with grease, for example silicone type, and the cable entries shall be a degree of protection at least to 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.



## ADDITION

INERIS 02ATEX0072X / 01

ENCLOSURE TYPE GUB ./ . - . or GUB-QL ./ . -

Manufactured by YSEBAERT

### (15) - PURPOSE OF THE ADDITION

Update of the descriptive documents allowing:

- Modification of the type: the type GUB can be completed by EMH.
- Mounting of a cover fitted with a glass window.

### PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are modified as followed:

The maximal dissipated power defined in the basic certificate for type GUB only fitted with a window must be reduced of 15% and are indicated in the descriptive documents.

### MARKING

The marking defined in the basic certificate is unchanged.

### ROUTINE EXAMINATIONS AND TESIS

The routine verifications and tests stipulated by the basic certificate are unchanged.

### (16) - DESCRIPTIVE DOCUMENTS

The documents referred to below, constitute the file describing the modifications of the apparatus and forming the subject of the present addition.

- Drawing n° C 20200005 dated of 2002.02.13 and signed of 2004.06.04
- Technical Note TN-20-2002-01 of 2002.10.15 Add1 of 2004.06.01

**(17) - SPECIFIC PARAMETERS OF THE TYPES OF PROTECTION CONCERNED**

The special conditions for safe use defined in the basic certificate are unchanged.

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

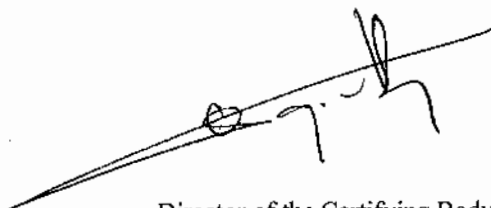
The respect of the Essential Health and Safety Requirements defined in the basic certificate is unchanged.

Verneuil-en-Halatte, 2004 07 07



X. LEFEBVRE

Engineer at the Laboratory of Certification of  
ATEX Equipment



Director of the Certifying Body,  
By delegation  
B. PIQUETTE  
Deputy manager of Certification



## ADDITION

- (3) INERIS 02ATEX0072X/02
- (4) ENCLOSURE TYPE GUB ./ . or GUB-QL ./.-. or GUB./EMH.
- (5) Made by YSEBAERT N.V.

(15) PURPOSE OF THE ADDITION

As a variation:

Up dating of descriptive documents.

Application of new standards :

EN 60079-0 : 2006, 60079-1 : 2004, 60079-11 : 2007,

EN 61241-0 : 2006, 61241-1 : 2004, 61241-11 : 2006,

IEC 60079-0 : 2004, 60079-1 : 2003, 60079-11 : 2006,

IEC 61241-0 : 2004, 61241-1 : 2004, 61241-11 : 2005.

New address: Koralenhoeve,13 - 2160 Wommelgem - Belgium

PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are unchanged.

MARKING

The marking is modified as follows:

A) Enclosure without intrinsic safety element :

YSEBAERT N.V.

Koralenhoeve, 13


2160 Wommelgem - Belgium

GUB ./ . or GUB-QL ./.-. or GUB./EMH.

INERIS 02ATEX0072X

(Serial number)

(Year of construction)

 II 2 GD

Ex d IIC (\*)

Ex tD A21 IP66 (\*)

T.Amb : (\*\*)

T.cable : 90°C for T135°C (T4)

for use in explosive gas atmospheres

(\*) T6 or T5 or T4

(\*\*) -50°C to 40°C or -50°C to 50°C or -50°C to 55°C or

-20°C to 50°C or -20°C to 55°C

for use in explosive dust atmospheres

(\*) T85°C or T100°C or T135°C

(\*\*) -50°C to 40°C or -50°C to 50°C or -50°C to 55°C or  
-20°C to 50°C or -20°C to 55°C

B) Enclosure with intrinsic safety element "ia" :


YSEBAERT N.V.

Koralenhoeve, 13

2160 Wommelgem - Belgium

GUB ./.-. or GUB-QL ./.-. or GUB./EMH.

INERIS 02ATEX0072X

 II 2 (1) GD

Ex d [ia] IIC T6

Ex tD [iaD] or [ia] A21 IP66 T85°C

T.Amb : -25°C to 40°C or T.Amb :-50°C to 40°C

C) Enclosure with intrinsic safety element "ia" or "ib" :


YSEBAERT N.V.

Koralenhoeve, 13

2160 Wommelgem - Belgium

GUB ./.-. or GUB-QL ./.-. or GUB./EMH.

INERIS 02ATEX0072X

 II 2 (2) GD

Ex d [ia] or [ib] or [ia/ib] IIC T6

Ex tD [iaD] or [ibD] or [iaD/ibD] or [ia] or [ib] or [ia/ib] A21 IP66 T85°C

T.Amb : -25°C to 40°C or T.Amb :-50°C to 40°C

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

ROUTINE EXAMINATIONS AND TESTS

The routine examinations and tests are modified as follows:

For an use under a minimum ambient temperature between -20°C and -50°C, the routine test prescribed by the basic certificate has to be performed under the value of 21,6 bar.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation describing the modification of the equipment, subject of this present addition.

- Index of descriptive document (4 pages).

(17) SPECIAL CONDITIONS FOR SAFE USE

The special are modified as follows :

Enclosures Ex d variations are intended to be used in an ambient temperatures range of -50°C to +55°C.

Enclosures Ex d [ia and/or ib] or Ex tD [iaD and/or ibD] variations are intended to be used in an ambient temperatures range of -25°C to 40°C. For lower temperature, a special variation is defined.

These special conditions are defined in instruction notice.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

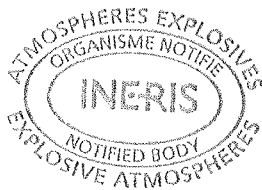
The respect of the Essential Health and Safety Requirements is completed as follows:

- Conformity to the standards EN 60079-0:2006, EN 60079-1:2004, EN 60079-11:2007, EN 61241-0:2006, EN 61241-1:2004, EN 61241-11:2006, IEC 60079-0:2004, IEC 60079-1:2003, IEC 60079-11:2006, IEC 61241-0:2004, IEC 61241-1 : 2004, IEC 61241-11 : 2005.
- All provisions adopted by the manufacturer and defined in the descriptive documents.

Verneuil-en-Halatte, 2008 04 21

X. LEFEBVRE

Project Manager at the ATEX  
Equipment Evaluation Laboratory



Director of the Certifying Body,  
By delegation  
T. HOUEIX  
Certification Officer  
Certification Division