(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 07ATEX0048X**

(4) Equipment or protective system:

FLAMEPROOF BOX TYPE LEF 550-..-.-.

(5) Manufacturer: **LEF INDUSTRIES**

(6) Address: ZI de Lannugat
F-29100 DOUARNENEZ

(7) This equipment or protective system 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) NERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, certifies that this equipment or protective system fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in annex II of the Directive.

The examinations and the tests are consigned in confidential report No P77629/07.

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

- conformity with:

EN 60079-0 : 2006	EN 61241-0 : 2006
EN 60079-1 : 2004	EN 61241-1 : 2004

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

Parc Technologique Alata BP 2 F-60550 Verneuil-en-Halatte
tél + 33(0)3 44 55 66 77 **fax** + 33(0)3 44 55 66 99 **internet** www.ineris.fr
Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Senlis B 381 984 921 - Siret 381 984 921 00019 - APE 743B

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

(11) This EC type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. 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 protective system will have to contain:

⟨Ex⟩ II 2 GD **Ex d IIC T6 or T5 or T4**

Ex tD A21 IP66 T85°C or T100°C or T135°C

Verneuil-en-Halatte, 2007 12 04

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

S. MALGER
Project Manager at the ATEX Equipment Evaluation Laboratory

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

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N°INERIS 07ATEX0048X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

The flameproof box consists of a circulars body and a lid made in C35 steel or 316L stainless steel.

It is used for copy of the position of valves through command axis by delivering an electrical signal (contact, transmitter, etc.) and/or visual signal by adding an index of position installed on the axis of cover.

In the absence of command axis, it will be used as junction box.

The connection to external circuits is provided by one or two cable entries of a certified type. The unused entry will be closed with a blanking element of a certified type.

PARAMETERS RELATING TO THE SAFETY

Maximal voltage : 250 V
Maximal dissipated power : 10 W

MARKING

Marking has to be readable and indelible; it has to include the following indications:

LEF INDUSTRIES
F-29100 DOUARNENEZ
LEF 550-..-.-.
INERIS 07ATEX0048X
(Serial number)
(Year of construction)
Ⓔx II 2 GD
Ex d IIC T6 or T5 or T4
Ex tD A21 IP66 T85°C or T100°C or T135°C
Tamb : from -20°C to 40°C or 60°C or 85°C
or
Tamb : from -40°C to 40°C or 60°C or 85°C
Type of threadings
WARNING : DO NOT OPEN WHEN ENERGIZED

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

For an use until -20°C and in accordance with clause 16.2 of the EN60079-1 standard, the equipment defined above is exempted of routine test in owing to the fact that it has undergone a static type test at 4 times the reference pressure under 32 bars.

For an use until -40°C and in accordance with clause 16.1 of the EN60079-1 standard, each apparatus defined above has to have successfully passed the following individual tests before delivery an overpressure test of a period comprised between 10 and 60 seconds under 17.6 bars.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation of the equipment, subject of this certificate.

- Descriptive note DC550/A (5 pages) of 2007.11.21
- Instructions note DQ 80.A (1 page) of 2007.12.03
- Drawing n° LC5-IN1 of 2007.09.27
- Drawing n° LC5-IN2 of 2006.12.07
- Drawing n° LC5-IN3 of 2006.12.07
- Drawing n° LC5-IN4 of 2007.11.12
- Drawing n° 694 ind.B of 2007.10.08

(17) SPECIAL CONDITIONS FOR SAFE USE

The yield stress of screws used for the assembly of the lid must be higher or equal to 450 MPa or of a A4-70 property class.

For an use at +60°C, cables and cable entries must be compatible with a temperature of 74°C.

For an use at +85°C, cables and cable entries must be compatible with a temperature of 99°C.

The gap (diametral adjustement) between the command axis and the lid and between the second command axis and the body of the flameproof enclosure must not exceed 0.07 mm.

These conditions are stipulated in the instructions.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

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

- Conformity to the European standards EN 60079-0, EN 60079-1, EN 61241-0 and EN 61241-1.
- All provisions adopted by the manufacturer and defined in the descriptive documents.