(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 05ATEX0025X**

(4) Protective system or equipment:

ASYNCRONOUS MOTORS SERIE RL.....

(5) Manufacturer: **RAEL MOTORI ELETTRICI**

(6) Address: Via Alessandria, 73
I – 15077 Predosa (AL)

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

(8) The INERIS, 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 protective system or equipment 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 appendix II of the Directive.

The examinations and the tests are consigned in official report No P69514/05

(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 + A1
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 protective system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

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

(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:

II 2 G **EEx d IIC T6 or T5 or T4**

or

II 2 GD **EEx d IIC T6 or T5 or T4 T85°C or T100°C or T135°C IP65 or IP66**

Verneuil-en-Halatte, 2005 06 26

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

C. PETITFRERE

Engineer at the Laboratory of Certification of ATEX Equipment

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

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N° INERIS 05ATEX0025X

(15) **DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM**

The electrical asynchronous motors serial RL are made in light alloy ; The shaft heights are 63, 71, 80 and 90 mm.

The electrical connection with the external electrical circuits can be carried out either by separate cable gland or by integral cable gland.

The motors are fitted with two or three internal thermal probes put in winding.

Eventually heating dispositifs can be fitted in the winding.

Motors can be supplied through a frequency converter.

The motor and terminal box enclosures gets the degrees of protection IP55 or IP56 in standard version (version II2G) or IP65 or IP66 (version II2GD) according to the European standards EN 60034-5 and EN 60 529.

PARAMETERS RELATING TO THE SAFETY

Electrical characteristic :

Maximum supply voltage	:	750 V
Frequencies	:	50/60 Hz
Power of motors	:	from 0,04 kW to 3,6 kW
Isolation class	:	F

Frequency variation :

Range of variable frequencies : 1 to 200 Hz

The maximum power of motors varies according to the type of the motor and the electric characteristics.

The various powers are specified in the descriptive documents.

Characteristic of the thermal probes fitting on the motors :

Threshold of release :
- 70°C ± 5°C for temperature class T6 or T85°C,
- 90°C ± 5°C for temperature class T5 or T85°C,
- 120°C ± 5°C for temperature class T4 or T85°C,

Heating device :

Maximum supply voltage : 550 V
Maximum power : 50 W

Ambient temperatures range :

From -20°C to 40°C for temperature class T6 or T85°C
From -20°C to 50°C for temperature class T5 or T100°C
From -20°C to 60°C for temperature class T4 or T135°C

MARKING

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

A) **Version motor and terminal box category 2 IIG** :

RAEL MOTORI ELETTRICI
I - 15077 Predosa (AL)
RL..... **(*)**
INERIS 05ATEX0025X
(Serial number)
(Year of construction)
⟨Ex⟩ **II 2 G**
EEx d IIC **(**)**
T_{amb} : **(*****)**

DO NOT OPEN WHEN ENERGIZED

B) **Version motor and terminal box category 2 IIGD** :

RAEL MOTORI ELETTRICI
I - 15077 Predosa (AL)
RL..... **(*)**
INERIS 05ATEX0025X
(Serial number)
(Year of construction)
Ex **II 2 GD**
EEx d IIC **(**)**
T **(***)** IP**(****)**
T_{amb} : **(*****)**

DO NOT OPEN WHEN ENERGIZED

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

(**) Indication of the temperature class T6 or T5 or T4 according to the ambient range of temperatures.

(***) Indication of the temperature class T85°C or T100°C or T135°C according to the ambient range of temperature.

(****) IP65 or IP66.

(*****) Indication of ambient temperature ranges when that it is different from -20°C to 40°C.

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

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

ROUTINE EXAMINATIONS AND TESTS

According to 16.2 of standard EN 50 018, the motor and the terminal box, defined above is exempted of routine test in view of the fact that it has undergone a static type test at 4 times the reference pressure under :

- 24 bar for the compartment motor
- 29,6 bar for the terminal box.

(16) DESCRIPTIVE DOCUMENTS

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

Certification file n°RAEL-001 dated on 2005.05.09

This file, signed on 2005.05.09 included 13 parts.

(17) SPECIAL CONDITIONS FOR SAFE USE

In the case of replacement of the screws of the fastener elements of each part of the flameproof enclosure the user will have to choose:

- For the screws to the closing enclosure : steel or stainless steel with quality higher or equal to 8.8.
- For the tie rods : steel or stainless steel with quality higher or equal to 4.6.

For the motor with integral cable gland, the user will have to connect, the free extremity of the enclosure supply cable in a non-explosive atmosphere, or in an enclosure protected by a protection mode recognised and adapted to the employment.

The other conditions are stipulated on the instructions.

(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 and EN 50 281-1-1.
- The whole of the provisions adopted by the manufacturer and described in the descriptive documents.