

CERTIFICATE OF CONFORMITY

Number of the certificate of conformity: **INERIS N° 32724/18**

Equipment:

FLEXIBLE SHEATH TYPE AIRDUC PUR-INOX 351, 355, 356 and BARBUC PUR-INOX 382

Manufacturer:

NORRES France

Address:

**27D rue des Blancs Monts - ZAC les Blancs Monts
F- 51350 CORMONTREUIL**

This equipment is described in the descriptive documents quoted here after :

- Technical sheet (Ref : 20160913 / 20180923 / 20180924 / 20160912 / 20180309) signed on 2018.11.27
- Plans (Ref : 351-0200-1018 / 355-0200-1018 / 356-0152-1018 / 382-0100-1014) signed on 2018.11.27

The tests and verifications carried out by the Institut National de l'Environnement Industriel et des Risques (INERIS), Industrial and Commercial Public Establishment, founded by ordinance No. 90-1089 of 7 December 1990, indicate that this equipment complies with:

- The rules of procedure for certification ELECTROSTATIC-INERIS PR0971AA.
- Standard NF EN ISO 8031: 2009 ;
- Standard CEI/TS 60079-32-1:2017.

This equipment can be used in explosive atmospheres, according to its electrostatic properties, in the following domains:

- Surface industry : Dust atmospheres in the hazardous areas 20, 21, 22 group IIIA, IIIB, IIIC (according to the directive 1999/92/EC).
Gas atmospheres for group IIA, IIB, IIC in the hazardous areas 0, 1, 2 (according to the directive 1999/92/EC).

Special conditions for safe use:

- The equipment has to be earth-connected with a resistance lower than 1.10^8 ohm.
- The various connectors that can be used with the sheath, must be conductors / dissipators of electrostatic charge and grounded ($R < 1.10^8$ ohm) without disturbing the grounding of the sheath itself.

The examinations and the tests are consigned in confidential report No 168807/18.

The Audit of the production site is consigned in report No 168807/18.

End of validity of this certificate is 3 years from the date of signature.

Verneuil-en-Halatte, 2019 02 11



Dominique CHARPENTIER
Responsable Pôle Certification
Certification Division, Manager

A handwritten signature in blue ink, appearing to be "D. Charpentier", written over the printed name.

The Chief Executive Officer of INERIS
By delegation

TEST REPORT

RA00-168807/18

Date of issue: 30/11/18

MANUFACTURER



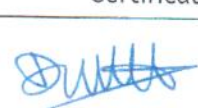
Company : NORRES france
 Address : 27D rue des blancs mont – ZAC les Blancs monts
 Location : 51 350 Cormontreuil - FRANCE

APPARATUS

Name : Flexible pipe
 Type/Model :
 AIRDUC PUR-INOX 351, 355, 356;
 BARDUC PUR-INOX 382.
 Category : DUST atmosphere zone: 20, 21, 22 (IIIA, IIIB, IIIC) and
 Gas IIA, IIB, IIC zone: 0, 1, 2

ASSESSMENT STANDARDS

- The rules of procedure for certification ELECTROSTATIC-INERIS PR0971AA.
- Standard ISO 8031,
- Standard CEI/TS 60079-32 :2017

	<i>Compiled by</i>	<i>Reviewed by</i>	<i>Approved by (ExCB)</i>
NAME	Y.OLLIER	B.DEBRAY	D.CHARPENTIER
Function	Responsable d'Affaires LPES Direction des Risques Accidentels	Responsables d'unités ERIP Direction des Risques Accidentels	Le Directeur Général de l'INERIS Par délégation D. CHARPENTIER Responsable pôle Certification
Visa			

Description of equipment:

NORRES has submitted to certification various flexibles pipes. These various pipes can be equipped with conductor / dissipator connectors.

Pipes are composed of plastic and metal spire, they are hybrid pipes

NORRES usually only supplies the hose (without connector) to the user. And then the user equips the pipe respecting the information given in the certificate.

Tests list and results:

In this report, only parts of standard concerning electrostatic risk are evaluated.

Conformity to ISO 8031 : 2009 §4.4 and § 4.6.1

Clause	Requirement - Test	Result - Remark	Verdict
4.4	Conditioning at 23°C and 50%HR	Test report ERIP-17-570; ERIP-17-571; ERIP-17-572; ERIP-17-573	PASS
4.6.1	Apply electrod according to § 4.2.2.1 (electrod width 25mm)	Copper electrod of width 25 mm	PASS
	Apply power and measure the resistance	Test report ERIP-17-570; ERIP-17-571; ERIP-17-572; ERIP-17-573	PASS

Conformity to CEI 60079-32-1 (§ 7.7.3.4)

Clause	Requirement - Test	Result - Remark	Verdict
7.7.3.4	Table 16, a pipe is dissipative when the resistance is lower than : 100 MOhm. Resistance in inner lining and outer cover must be lower than 100 MOhm	Test report ERIP-17-570; ERIP-17-571; ERIP-17-572; ERIP-17-573 The various pipes are dissipative with a resistance lower than 100 MOhm	PASS

COFRAC INERIS tests				
	EQUIPMENT	Test number	Observations	Verdict
	17AU802; 17AU803; 17AU804; 17AU805	ERIP-17-570; ERIP-17-571; ERIP-17-572; ERIP-17-573	Resistance test	Pass

Conclusion :

-The conformity to the « Electrostatic-INERIS » guidance is obtained by the positive results to the standard listed above, and with the quality audit.

- The other points of the standards have not been evaluated in this report.

Propose to certification: YES NO