



Marine & Offshore

Certificate number: 09511/D0 BV

File number: ACE 01/076/04

Product code: 2505H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**PRYSMIAN CABLES SPAIN SA**  
VILANOVA I LA GELTRÚ(BCN) - SPAIN

*for the type of product*

**INSTRUMENTATION AND COMMUNICATION CABLES**  
150/250 V  
AFUMEX NAU series

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC 60092-350 (2014), IEC 60092-360 (2014), IEC 60092-376 (2017)

IEC 60228 (2004)

IEC 60331-21 (1999)

IEC 60332-1-2 (2015), IEC 60332-3-22 Cat. A (2018)

IEC 60754-1/2 (2013)

IEC 61034-1/2 (2013)

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 11 Feb 2025**

**For Bureau Veritas Marine & Offshore,**

At BV BILBAO, on 11 Feb 2020,

Juan Jose GUTIERREZ GARCIA



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### **1. PRODUCT DESCRIPTION:**

Flame retardant, Fire resistant (FIRS Type only), Halogen Free and Low Smoke Control, Instrumentation and Communication Cables.

#### **1.1 - Common Specifications:**

Rated Voltage:	150/250 V
Temperature Class:	90°C
Flame retardant:	IEC 60332-1 & IEC 60332-3-22 Cat.A
Fire Resistant:	IEC 60331-21 (FIRS Type only)
Halogen Free:	IEC 60754-1/2
Low Smoke:	IEC 61034-1/2

#### **1.2 - Construction:**

Conductor:	Bare stranded copper - Class 5 or Class 2 (if required)
Fire resisting Layer:	Mica tape (FIRS type only)
Insulation:	HF XLPE
Individual Screen:	Aluminium / Polyester tape with tinned copper drain wire (H Type)
Collective Screen:	Aluminium / Polyester tape with tinned copper drain wire (O Type)
Armour:	Copper wire braid (TCu Type)
Filler:	Halogen free material (upon request)
Outer sheath:	Halogen Free Thermoplastic Polyolefin - SHF1

#### **1.3 - Product Range:**

Type	Number of Core	Cross-Sect. area (mm <sup>2</sup> )	Class
AFUMEX NAU XA AFUMEX NAU XTCuA AFUMEX NAU XHTCuA AFUMEX FIRS NAU XA AFUMEX FIRS NAU XTCuA AFUMEX FIRS NAU XHTCuA	1 2 3 4 5 to 27	0.75 to 1.5	Class 5 or Class 2
AFUMEX NAU XHOA AFUMEX NAU XOTCuA AFUMEX FIRS NAU XHOA AFUMEX FIRS NAU XOTCuA	1P,T,Q 2P,T,Q 3P,T,Q 4P,T,Q 5 to 27 P,T,Q	0.75 to 2.5	
AFUMEX NAU XHA	2P to 10P	0.75	Class 2
	10P	1.5	
	4T to 10T	0.75	
AFUMEX NAU XOA	1P to 24P	0.75	
	1T	0.75	
	1P to 3P	1.5	
AFUMEX FIRS NAU XHA	10P	1.5	
AFUMEX FIRS NAU XOA	7P	0.75	

### **2. DOCUMENTS AND DRAWINGS:**

#### **PRYSMIAN Data Sheets:**

ECN No. 118A Rev. 02, 134A Rev. 00, 135A Rev. 00, 137A Rev. 00, 138A Rev. 00, 139A Rev. 00 dated 03/07.

ECN No. 119A Rev. 02, 121A Rev. 02, 124A Rev. 02, 125A Rev. 02 dated 03/07.

AFUMEX FIRS NAU XOA CL2 250V, Rev. 1, dated 07 Jan 2019.

AFUMEX NAU XHA CL2 250V, Rev. 1, dated 07 Jan 2019.

AFUMEX NAU XOA CL2 250V, Rev. 1, dated 07 Jan 2019.

AFUMEX FIRS NAU XHA CL2 250V, Rev. 1, dated 07 Jan 2019.

**3. TEST REPORTS:**

- **FERCABLE S.A:** Test reports referring to certification issued by D.N.V. and annexed to FERCABLE S.A. B.V. letter certification request dated on 10.03.1999. (See B.V. Madrid letter MPO/99/591/ESP/SAG).
- **B.V. Madrid:** Letter MPO/99/01551/ESP/MAR dated on 17.09.1999 with annexed report of complementary tests carried out by FERCABLE S.A. on date of 17.06.1999 and stamped by B.V.
- **Pirelli:** Test report dated Jan. 2003. The tests were witnessed by a BV Surveyor.

**PRYSMIAN CABLES SPAIN SA:**

- Test reports N° 4675, 4676, 4677, 4678, 6728, 6730, 6731, 6353, 6354, 6355 dated 27 Jun 2006.
- Test reports N° 29980/13, 29993/13, 29984/13, dated 25 Feb 2013.
- Test reports N° 45913/19, 45914/19, 45915/19, 45926/19, 45927/19, 45928/19, dated 17 Jun 2019.

**4. APPLICATION / LIMITATION:**

BUREAU VERITAS Rules for the Classification of Steel Ships and IEC 60092-3xx.

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The INSTRUMENTATION AND COMMUNICATION CABLES are to be supplied by **PRYSMIAN CABLES SPAIN SA** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **PRYSMIAN CABLES SPAIN SA** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **PRYSMIAN CABLES SPAIN SA** has declared to Bureau Veritas the following production sites:

**PRYSMIAN CABLES SPAIN SAU**  
**Carretera C-15 - Km. 2**  
**08800 VILANOVA I LA GELTRÚ(BCN)**  
**SPAIN**

**PRYSMIAN CABLES SPAIN, S.A. -Planta SANTA PERPETUA DE MOGODA-**  
**Carrer Can Vinyalets, 2**  
**8130 Santa Perpètua de Mogoda, Barcelona**  
**08130 Santa Perpetua de Mogoda**  
**SPAIN**

**6. MARKING OF PRODUCT:**

The cable shall be marked on the surface outer sheath, in a durable legible and visible manner, with the following information through the length of cable:

- 1) - Voltage grade.
- 2) - Cable symbol and temperature class.
- 3) - Number of conductors and conductor size.
- 4) - Applicable standard(s) to flame retardant and fire resistance if any.
- 5) - Manufacturer's name or trademark.
- 6) - Year of manufacture.

**7. OTHERS:**

7.1 - It is **PRYSMIAN CABLES SPAIN SA**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 09511/C0 BV issued on 21 Oct 2013 by the Society.

\*\*\* END OF CERTIFICATE \*\*\*