



MARINE DIVISION

Certificate number: 12422/B0 BV

File number: ACE 01/735/02

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 Y SISTEMAS, S.L. - Planta FERCABLE**  
Barcelona - SPAIN

*for the type of product*

### INSTRUMENTATION AND COMMUNICATION CABLES

CONTROL and INSTRUMENTATION CABLES - Type: TEOF - RFOU(c), RFOU(i), BFOU(c), BFOU(i)

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships.

*This certificate is issued to attest that BUREAU VERITAS 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: 08 Apr 2016**

**For BUREAU VERITAS,**

At BV MADRID, on 08 Apr 2011,

Montserrat Espin



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. 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 Division 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 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.

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

Type	Number of cores	Cross Sectional Areas (mm <sup>2</sup> )	Temp. Class (°C)	Remarks
TEOF RFOU (c) RFOU (i)  250V	Paire ( x2)	0.75  1.0  1.5  2.5  0.75  1.0  1.5	90	IEC 60332-3-22 (Cat.A).
	1, 2, 4, 8, 12, 16, 24			
	1, 2, 4, 8, 10, 12, 14, 15, 18, 20, 24			
	1, 2, 4, 8, 12			
	1, 2, 4, 8, 12, 16, 24			
	Triple (x3)			
	8			
TEOF BFOU (c) BFOU (i)  250V	Paire (x2)	0.75  1.0  1.5  2.5  0.75  1.0  1.5  2.5	90	IEC 60331
	1, 2, 4, 12, 16, 19, 24			
	1, 2, 3, 4, 8, 12, 14, 15, 18, 20, 24			
	1, 2, 4, 8, 12			
	1, 2, 4, 8, 12, 16			
	Triple (x3)			
	1, 2, 4, 8, 12			
	1, 8			
	1, 2, 4			
	16			

### Main Specifications:

Conductor: Tinned, Stranded copper (only for RFOU)  
Tinned, Stranded copper Mica-tape applied directly over the conductor (only for BFOU)

Insulation: EPR

Screen: Al-polyester or Cu-polyester tape w/tinned copper drain wire

Inner sheath: Halogen free compound

Metal covering: Copper wire braid

Over sheath: SHF2

### 2. DOCUMENTS AND DRAWINGS:

Documentation filed in ACE 01/735/02.

### 3. TEST REPORTS:

Fercable test report dated August 1992 & December 1992 filed in ACE 01/735/02.

**4. APPLICATION / LIMITATION:**

4.1 - BV Rules for the Classification of Steel Ships and IEC 60092 series.

4.2 - Approval valid for units having to comply with IMO Resolution A649 (The "MODU Code").

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The control and information cable are to be manufactured, examined and tested by **PRYSMIAN CABLES Y SISTEMAS, S. L. - Planta FERCABLE, Sant Vicenç dels Horts (Barcelona) - SPAIN** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end **PRYSMIAN CABLES Y SISTEMAS, S. L. - Planta FERCABLE, Sant Vicenç dels Horts (Barcelona) - SPAIN** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 - **PRYSMIAN CABLES Y SISTEMAS, S. L. - Planta FERCABLE, Sant Vicenç dels Horts (Barcelona) - SPAIN** has declared to Bureau Veritas that the type of product described in this certificate may be manufactured at the following production site:

**PRYSMIAN CABLES Y SISTEMAS, S. L. - Planta FERCABLE**  
**Avda. Torrelles, 15-23**  
**08620 Barcelona**  
**Sant Vicenç dels Horts**  
**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:

6.1 - Voltage grade.

6.2 - Cable symbol.

6.3 - Cable size.

6.4 - Manufacturer's name or trademark.

6.5 - Year of manufacture.

**7. OTHERS:**

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the cables at any time and that **PRYSMIAN CABLES Y SISTEMAS, S. L. - Planta FERCABLE, Sant Vicenç dels Horts (Barcelona) - SPAIN**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the cables and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N°12422/A2 BV issued on 06/Nov./2006 by the Society.

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