



Marine & Offshore

Certificate number: 12421/C1 BV

File number: ACE 01/735/01

Product code: 25011

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 SAU
 VILANOVA I LA GELTRÚ(BCN) - SPAIN

for the type of product
CABLES (LOW VOLTAGE)
 TEOF - RU, BU, RFOU, BFOU series.
 0.6/1kV

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC 60092-350 (2014), 353 (2014), 360 (2014), IEC 60228 (2004), IEC 60754-1/2 (2011), IEC 61034-2 (2013), IEC 60331-1/21 (1999), IEC 60332-1-2 (2004), IEC 60332-3-22 Cat.A (2009).

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: 25 Jan 2022

For Bureau Veritas Marine & Offshore,

At BV BARCELONA, on 18 Dec 2018,

Sergio Julian LOPEZ VIDAL



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:

The **TEOF series** are low voltage cables for Marine & Offshore applications

1.1 - Specification:

Rated voltage	0.6/1kV
Flame retardant	IEC 60332-1-2 & IEC 60332-3-22 Cat.A
Fire resistant	IEC 60331-1/21 (BU & BFOU series only)
Halogen free	IEC 60754-1
Low smoke	IEC 61034-1/2

1.2 - Construction

Conductor:	Tinned or bare stranded copper conductor, Class 2 & 5
Fire resisting layer:	Mica taoe (BU & BFOU series only)
Insulation:	EPR, HEPR
Inner sheath:	Halogen free compound (except for RU and BU)
Metal covering:	Copper wire braid (except for RU and BU) or tinned copper
Over sheath:	SHF2

1.3 - Approval range:

Type	Cross Sectional Areas (mm ²)	Number of cores
TEOF RU - BU	1.5 to 300	1
	1.5 to 120	2
	1.5 to 185	3
	1.5 to 120	4
	1.5 to 2.5	5 to 27
TEOF-RFOU	1.5 to 300	1
	1.5 to 120	2
	1.5 to 185	3
	1.5 to 120	4
	1.5 to 2.5	5 to 27
	120 + 70	3 + 1
	150 + 95	3 + 1
	185 + 95	3 + 1
	240 + 120	3 + 1
	120 + 70	4 + 1
	150 + 95	4 + 1
185 + 95	4 + 1	
240 + 120	4 + 1	
TEOF-BFOU	1.5 to 300	1
	1.5 to 120	2
	1.5 to 185	3
	1.5 to 120	4
	1.5 to 2.5	5 to 27
	120 + 70	3 + 1
	150 + 95	3 + 1
	185 + 95	3 + 1
	240 + 120	3 + 1

2. DOCUMENTS AND DRAWINGS:

For C0 version:

Data sheet ref. 16.0245, dated nov.2016.

Data sheet ref. 16.0242, dated nov.2016.

Data sheet ref. 16.0244, dated nov.2016.

Data sheet ref. 16.0243, dated nov.2016.

3. TEST REPORTS:

Fercable test report dated August 1992 & February 1993.

For C0 version:

Tests certificate dated 05.Oct.2016.

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 cables are to be supplied by **PRYSMIAN CABLES SPAIN SAU** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - For information, **PRYSMIAN CABLES SPAIN SAU** has declared to Bureau Veritas the following production site(s):

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

**PRYSMIAN CABLES SPAIN, S.A.U -Planta SANTA PERPETUA DE MOGODA-
Carrer Can Vinyalets, 2
08130 SANTA PERPETUA DE MOGODA
BARCELONA
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 and temperature

6.3 - Cable size.

6.4 - Manufacturer's name or trademark.

6.5 - Year of manufacture.

6.6 - Applicable standard(s) to flame retardant/fire resistance (if any)

7. OTHERS:

7.1 - It is **PRYSMIAN CABLES SPAIN SAU** 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° 12421/C0 BV issued on 25 Jan 2017 by the Society.

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