



MARINE DIVISION

Certificate number: 18981/B0 BV

File number: ACE 01/770/01

Product code: 2522H

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

Draka Elevator/Prysmian Group
Rocky Mount, NC - UNITED STATES OF AMERICA

for the type of product

TRAVELLING CABLES

300/500V - 450/750 V
Circular Elevator Travelling Cables, Type: ETT Series.

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.
IEC 60227-1/2/6(71c), IEC 60811, IEC 60332-1.

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: 19 Apr 2018

For BUREAU VERITAS,

At BV PORT EVERGLADES CENTRE, on 19 Apr 2013,

Flavio Rosas



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:

Draka ETT Circular Elevator Travelling Cables for Marine and Offshore applications.

1.1 - Specifications:

Rated voltage: 300/500 V or 450/750 V depending on cross-sectional area according to IEC 60227-6 (71c)
 Temperature class: 70°C according to IEC 60227
 Flame retardant: IEC 60332-1

1.2 - Construction:

Central Support: Steel or Jute
 Conductor: Stranded bare soft drawn copper
 Insulation: PolyVinyl Chloride - PVC/D
 Filler: Jute if any
 Braid: Rayon or Cotton (95% Coverage)
 Outer Sheath: PolyVinyl Chloride - PVC/ST5
 Option: Polyurethane - PUR

1.3 - Product Range: ETT Type

Product Code (First Letters)	Size / Type of Conductors	Remarks
J.. JC.. WS.. WSCC.. CWS.. CSA.. CSX.. CWSF..	14 to 18 AWG - 1.5 to 0.75 mm ² Cores 18 or 20 AWG - 0.75 or 0.5 mm ² Shielded Pairs RG6/U or RG11/U Coaxial cable Optical Fiber Cable	IEC 60227-6 (71c) Flame retardant according to IEC 60332-1

2. DOCUMENTS AND DRAWINGS:

Draka:

Extract of Catalogue / Draka Elevator Products / Super-Flex Travelling Cable Type ETT/300V.
 Data Sheets - CWS44, CWS46, J30-18, J10-18, JC45, CSX83, CWS59.

3. TEST REPORTS:

Draka:

Test Plan for Circular Flexible Cable Type 60227 IEC 71c.
 BUREAU VERITAS 60227-6:2001 IEC 71c - Test Reports Rev.A dated 19/11/2007 (witnessed by BV Surveyor).
 BUREAU VERITAS Report of Inspection No. 2006 1201 dated 20 Dec. 2007 - Flame retardant Test according to IEC 60332-1 on PUR sheathed cables.
 BUREAU VERITAS Report of Inspection N°2012 1399, dated 03/27/2013.

4. APPLICATION / LIMITATION:

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.
 4.2 - Approval valid for units having to comply with IMO Resolution A649 (The "MODU Code").

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The travelling cables are to be supplied by **Draka Elevator/Prysmian Group** 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.
 5.3 - **Draka Elevator/Prysmian Group** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

Draka Elevator/Prysmian Group
2151 North Church Street
Rocky Mount, N.C. 27804
UNITED STATES OF AMERICA

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:

- Voltage grade, Cable symbol and Temperature Class
- Applicable standard(s) to flame retardant
- Number of conductors and conductor size
- Manufacturer's name or trade mark, 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:

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will accept full responsibility for informing shipbuilders, ship-owners 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° 18981/A1 BV issued on 06/02/2012 by the Society.

*** END OF CERTIFICATE ***