



Marine & Offshore

Certificate number: 32048/B1 BV

File number: ACE1/126/8

Product code: 25021

*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*

**UNTEL KABLolari SANAYI VE TICARET A/S**  
KOCAELI - Türkiye

*for the type of product*

**CABLES (MEDIUM/HIGH VOLTAGE)**

MVCECH series.

3.6/6kV, 6/10kV, 8.7/15kV, 12/20kV.

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC 60092-350 (2020), IEC 60092-354 (2020), IEC 60092-360 (2021)

IEC 60228 (2004)

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

IEC 60754-1/2 (2011)

IEC 61034-1/2 (2019)

*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: 21 Jul 2025**

**For Bureau Veritas Marine & Offshore,**

At BV ISTANBUL, on 26 Dec 2022,

Gurcan Yilmaz

***This certificate was created electronically and is valid without signature***



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 **MVCECH series** are medium and high voltage cables for Marine and Offshore applications:

#### 1.1 - General specifications:

Rated voltage:	3.6/6kV, 6/10kV, 8.7/15kV, 12/20kV
Temperature range:	-40°C / +90°C
Flame retardant:	IEC 60332-1-2, IEC 60332-3-22 Cat.A
Halogen free:	IEC 60754-1/2
Low smoke:	IEC 61034-1/2

#### 1.2 - Construction:

Conductor:	Stranded, annealed copper wire Class 2 (Class 5 or tinned copper on request)
Screening:	Semiconductive layer
Insulation:	HEPR
Screening:	Semiconductive layer
Seperator:	Copper tape
Bedding and/or inner sheath and/or filler:	Bedding/Inner sheath: Halogen free compound. Filler: Flame retardant & non-hygroscopic material.
Screen:	Copper braided screen Copper / polyester tape coverage 100% and copper wire braided screen min. coverage 90% (VFD type)
Outer sheath:	SHF1

#### 1.3 - Approval range:

Type	Number of core	Cross-sect. area (mm <sup>2</sup> )	Rated Voltage (kV)
MVCECH	1 & 3	10 to 400	3.6/6
		16 to 400	6/10
		25 to 400	8.7/15
		35 to 400	12/20
MVCECH-VFD	1	16 to 400	6/10
	3+3E	16+6 to 400+70	

### 2. DOCUMENTS AND DRAWINGS :

Data sheets ref. FR70-021 Rev. 2, dated 19 Nov 2014.

Date sheets ref. 2022\_11-TS-29, Rev.01, dated 18 Nov 2022.

### 3. TEST REPORTS :

#### UNTEL KABLOLARI SANAYI VE TICARET A/S:

Test report dated 03 Feb 2015.

Test report dated 17 Mar 2015.

Test report dated 30 Mar 2015.

Test reports N° T20020-R00 and T20022-R00, all dated 09 Jun 2020.

Test report dated 28 Nov 2022.

### 4. APPLICATION / LIMITATION :

BUREAU VERITAS Rules for the Classification of Steel Ships.

### 5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be supplied by **UNTEL KABLOLARI SANAYI VE TICARET A/S** 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, **UNTEL KABLOLARI SANAYI VE TICARET A/S** has declared to Bureau Veritas the following production site:

**UNTEL KABLOLARI SANAYI VE TICARET A/S**  
**DEMIRCILER KOYU**  
**MAKINE OSB**  
**6.CADDE NO.4 41455**  
**DILOVASI**  
**KOCAELI**  
**Türkiye**

**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 trade mark.
- 6) - Year of manufacture.

**7. OTHERS :**

7.1 - It is **UNTEL KABLOLARI SANAYI VE TICARET A/S**'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° 32048/B0 BV issued on 13 Apr 2015 by the Society.

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