



Marine & Offshore

Certificate number: 61131/A0 BV

File number: ACE1/126/12

Product code: 2509H

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 - TURKEY

for the type of product
COAXIAL CABLE
RG series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Offshore Units, Naval Ships and Yachts.
EN 50117-1 (2019)
IEC 60332-1-2 (2015), IEC 60332-3-24 (2018)
IEC 60684-2 (2011)
IEC 60754-1/2 (2019)
IEC 61034-1/2 (2019)
MIL-C-17

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: 03 Aug 2027

For Bureau Veritas Marine & Offshore,

At BV ISTANBUL, on 03 Aug 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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THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Coaxial cables for Steel Ships, Offshore Units, Naval Ships and Yachts.

1.1 - Specifications:

| | |
|------------------|-------------------------------|
| Flame Retardant: | IEC 60332-1-2, IEC 60332-3-24 |
| Halogen Free: | IEC 60684-2, IEC 60754-1/2 |
| Low Smoke: | IEC 61034-1/2 |

1.2 - Construction:

| | |
|---------------|---|
| Conductor: | Stranded tinned copper wire (RG 58 C/U (CuSn/CuSn) & (RG 58 C/U (CuSn/CuSn) (double shielded) & RG 11 A/U (CuSn/Cu) (double shielded) types) Bare solid copper (RG 59 U/4 (Cu/Al) (double shielded) & RG 6 U/4 (Cu/Al) (double shielded) & RG 6 A/U (Cu/CuAg) (double shielded) & RG 59 B/U (Cu/Cu) (double shielded) types) Stranded bare copper wire (RG 213 /U (Cu/Cu) & RG 213 /U (Cu/Cu) (double shielded) types) Stranded silver coated copper wire (RG 214 /U (CuAg/CuAg) (double shielded) & RG 214 /U (CuAg/CuAg) (triple shielded) types) |
| Insulation: | Solid polyethylene (RG 58 C/U (CuSn/CuSn) & (RG 58 C/U (CuSn/CuSn) (double shielded) type) & RG 6 A/U (Cu/CuAg) (double shielded) & RG 59 B/U (Cu/Cu) (double shielded) & RG 11 A/U (CuSn/Cu) (double shielded) & RG 213 /U (Cu/Cu) & RG 213 /U (Cu/Cu) (double shielded) & RG 214 /U (CuAg/CuAg) (double shielded) & RG 214 /U (CuAg/CuAg) (triple shielded) types) Gas injected skin/Foam/Skin polyethylene (RG 59 U/4 (Cu/Al) (double shielded) & RG 6 U/4 (Cu/Al) (double shielded) types) |
| 1st Screen: | Tinned copper wire braiding (RG 58 C/U (CuSn/CuSn) type) Aluminium/polyester/aluminium tape (RG 58 C/U (CuSn/CuSn) (double shielded) & RG 6 U/4 (Cu/Al) (double shielded) & RG 6 A/U (Cu/CuAg) (double shielded) & RG 59 B/U (Cu/Cu) (double shielded) & RG 11 A/U (CuSn/Cu) (double shielded) & RG 213 /U (Cu/Cu) (double shielded) & RG 214 /U (CuAg/CuAg) (triple shielded) types) Aluminium foil (RG 59 U/4 (Cu/Al) (double shielded) type) Copper wire braiding (RG 213 /U (Cu/Cu) type) Silver coated copper wire braiding (RG 214 /U (CuAg/CuAg) (double shielded) type) |
| 2nd Screen: | Tinned copper wire braiding (RG 58 C/U (CuSn/CuSn) (double shielded) type) Aluminium wire braiding (RG 59 U/4 (Cu/Al) (double shielded) & RG 6 U/4 (Cu/Al) (double shielded) types) Silver coated copper wire braiding (RG 6 A/U (Cu/CuAg) (double shielded) & RG 214 /U (CuAg/CuAg) (double shielded) & RG 214 /U (CuAg/CuAg) (triple shielded) types) Copper wire braiding (RG 59 B/U (Cu/Cu) (double shielded) & RG 11 A/U (CuSn/Cu) (double shielded) & RG 213 /U (Cu/Cu) (double shielded) type) |
| 3rd Screen: | Silver coated copper wire braiding (RG 214 /U (CuAg/CuAg) (triple shielded) type) |
| Outer sheath: | SHF1 |

1.3 - Product Range:

| Type | Frequency (MHz) | Number of cores | Cross-section (mm) |
|--|-----------------|-----------------|--------------------|
| RG 6 A/U (Cu/CuAg) (double shielded) | 2500 | 1 | 0.75 |
| RG 6 U/4 (Cu/Al) (double shielded) | 3000 | 1 | 1.02 |
| RG 11 A/U (CuSn/Cu) (double shielded) | 2500 | 7 | 0.4 |
| RG 58 C/U (CuSn/CuSn) RG 58 C/U (CuSn/CuSn) (double shielded) | 1000 | 19 | 0.18 |
| RG 59 U/4 (Cu/Al) (double shielded) | 3000 | 1 | 0.8 |
| RG 59 B/U (Cu/Cu) (double shielded) | 2500 | 1 | 0.58 |
| RG 213 /U (Cu/Cu) RG 213 /U (Cu/Cu) (double shielded) | 1000 | 7 | 0.75 |
| RG 214 /U (CuAg/CuAg) (double shielded) RG 214 /U (CuAg/CuAg) (triple shielded) | 2500 | 7 | 0.75 |

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2. DOCUMENTS AND DRAWINGS:

Specification N° 2020_01_TS_001, Rev. 001, dated 21 Feb 2022.
Specification N° 2020_01_TS_006, Rev. 001, dated 21 Feb 2022.
Specification N° 2020_01_TS_007, Rev. 001, dated 21 Feb 2022.
Specification N° 2020_01_TS_008, Rev. 001, dated 21 Feb 2022.
Specification N° 2020_01_TS_011, Rev. 001, dated 21 Feb 2022.
Specification N° 2020_01_TS_012, Rev. 001, dated 21 Feb 2022.
Specification N° 2020_01_TS_015, Rev. 001, dated 21 Feb 2022.
Specification N° 2020_01_TS_014, Rev. 001, dated 21 Feb 2022.

3. TEST REPORTS:**OREN KABLO AND UNTEL KABLO TEST PLACE:**

Test reports N° 200905/6/7/9 and 200910/1/2/5, dated 14 Jul 2020 and 25 Aug 2020.

UNTEL KABLOLARI SANAYI VE TICARET A/S:

Test reports N° T20020-R00, T20022-R00, T20027-R00, T20028-R00, T20029-R00, T20031-R00, T20033-R00 and T20035-R00, dated 01 Sep 2020.

Test reports dated 01 Sep 2020.

Test reports N° T210248/9-R00 and T210250/1/2/3/4/5-R00, dated 16 Nov 2021.

Test reports N° T210256/7/8/9-R00 and T210260/1/2/3-R00, dated 16 Nov 2021.

Test reports N° T210240/1/2/3/4/5/6/7-R00, dated 26 Nov 2021.

Test report dated 06 Apr 2022.

OREN KABLO:

Test reports dated 14 Jul 2020.

Test reports N° 200718, 200720 and 200723, dated 14 Jul 2020.

TSE LAB:

Test reports N° 661525, 661532/7, 661548, 661556/9 and 661561/2, dated 21 Jan 2022.

VDE Prüf- und Zertifizierungsinstitut GmbH:

Test report N° 296151-TL6-1, dated 30 May 2022.

4. APPLICATION / LIMITATION:

BUREAU VERITAS Rules for the Classification of Steel Ships, Offshore Units, Naval Ships and Yachts.

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 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 - UNTEL KABLOLARI SANAYI VE TICARET A/S 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, UNTEL KABLOLARI SANAYI VE TICARET A/S has declared to Bureau Veritas the following production site:

**OREN KABLO ANONIM SIRKETI
ORTAKOY SANAYI BOLGESI
SELIMPAPA
SILIVRI
34617 ISTANBUL
TURKEY**



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 - Numbering of the relevant standard
- 6.2 - Attenuation value (in dB/100 m at 800 MHz, rounded to an integer);
- 6.3 - Designation of the cable;
- 6.4 - Screening class;
- 6.5 - Euro-class (if applicable according to CPR requirements for fixed installations);
- 6.6 - Name of supplier.

7. OTHERS:

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.

*** END OF CERTIFICATE ***

