Type Approval Certificate

[Electric Cable]

Initial Approval 10 January 2025

Manufacturer Anhui Tiankang (Group) Shares Co., Ltd.
No.20, South Renhe Road, Tianchang City, Anhui Province, PRC

Product Description EPR insulated, SHF1 or SHF2 sheathed control Cable
- Rating : 150/200V (300V)

″ See Appendix 1 ″

Approval Condition ″ See Appendix 1 ″

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 1, Sec. 5 of the Rules for Classification, Steel Ships and IEC 60092-350, -360, IEC 60092-376, IEC 60332-1, -3-22 Cat.A.

This Certificate is valid until 9 January 2030

Issued at Shanghai, China on 10 January 2025

This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "http://e-cert.krs.co.kr" by using the tracking No(ME25002962041) and certificate No.(NAJ49590-EL003).

KOREAN REGISTER

General Manager of
Ship System Solution Team
CHINA KR Co., Ltd.

Note : *1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.*
2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 10 January 2025

A. Product Description

1. Product Specification

1) Specification & Standard

- Rated voltage : 150/200V (300V)
- Temperature class : 90℃ (IEC 60092-360)
- Flame retardant : IEC 60332-1 and IEC 60332-3-22(Cat.A)

2) Design Construction

- Cable series : CK : Shipboard Control Cable
- Conductor : Stranded tinned annealed copper wires or Stranded annealed copper wires as per IEC 60228, Class2
- Insulation : E : EPR (Ethylene-Propylene Rubber)
- Sheath : PF: Halogen-free flame retardant thermoplastic compound(SHF1)
  PJ: Halogen-free flame retardant thermoset compound(SHF2)
- Armor : 8 : Copper wire or tinned-copper wire braid armor
  9 : Galvanized Steel Wires braid armor
- Outer Sheath : 0 : Without outer sheath
  5 : Halogen-free flame retardant thermoset compound(SHF2)
  6 : Halogen-free flame retardant thermoplastic compound(SHF1)
- Flammability : DA: Single cable flame retardant
  SA : Bunched Cable Flame Retardant
  NA(NSA) : Bunched Cable Flame Retardant, Fire resistant
  SC : Bunched Cable Flame Retardant, Low Smoke, Halogen Free
  NC(NSC) : Bunched Cable Flame Retardant, Fire resistance, Low Smoke and halogen free

3) Product Range

Rated Voltage	Type (symbol)	No. of Cores	Cross Section(㎟)	Max. Conductor Temp. (℃)
150/250V (300V)	CKEF, CKEF80, CKEF90 /DA,SA, NA(NSA) CKEPF, CKEPF80, CKEPF90, CKEPF86, CKEPF96, CKEPJ, CKEPJ80, CKEPJ90, CKEPJ85, CKEPJ95 /SC, NC(NSC) CKEPFP, CKEPFP80, CKEPFP90, CKEPFP86, CKEPFP96, CKEPJP, CKEPJP80, CKEPJP90, CKEPJP85, CKEPJP95 /SC, NC(NSC) CKE86, CKE96, CKE85, CKE95, CKEP86, CKEP85 /SC, NC(NSC) CKEPJR, CKEPJR80, CKEPJR90, CKEPJR85, CKEPJR95,CKEPJRP /SC, NC(NSC)	2 ~ 48	0.5, 0.75 1.0, 1.5, 2.5	90

- Number of Core
  : 2, 3, 4, 5, 7, 8, 10, 12, 14, 16, 19, 24, 27, 30, 33, 37, 40, 44, 48

2. Approved Drawings and Documents

1) Data Sheet
   - Technical Specifications for Ethylene propylene rubber insulation Shipboard Control Cable with rated voltage 150/250V(300V) (2023.11)

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3. Test Reports, etc.

1) Test Report
   - CT16-3473-1 (2016.09.19), CT16-3473-2 (2016.09.19), CT16-3473-3 (2016.09.19), CT16-3473-4 (2016.09.19), TN24-1615A1E (2024.05.13), TN24-1617A1E (2024.05.13)

2) Cable Specification and etc.
   - Shipboard cable specification
   - Product description

B. Approval Condition

1. Application & Limitation

1) This approval is granted on the basis of the test report and the approved documentation.

2. Individual Product Cert. and Drawing Approval Requirement

1) Individual Product Certification is required.

3. Marking

1) Voltage grade, Cable symbol, Number of conductors and conductor size, Type of flame retardant, Manufacturer's name, Year of manufacture, Applied cable version

4. Others

N/A

< End of Certificate >