

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Electric Heating Cable**with type designation(s)
HTLe, HTP, HTR, HTS

Issued to

Wuhu Jiahong New Material Co. Ltd
Wuhu, China

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Type	Rated voltage (V)	Temp. class (°C)	Power [W/m] @ref. temp.	Suitable for Hazardous areas
HTLe	110-120V, 208-277V		10-33	Yes* (see note at page 3)
HTP	110-120V, 208-277V		15-60	Yes* (see note at page 3)
HTR	110-120V, 208-277V		10-40	Yes* (see note at page 3)
HTS	110-120V, 208-277V		15-60	Yes* (see note at page 3)

Issued at **Hamburg** on **2018-05-23**This Certificate is valid until **2023-05-22**.DNV GL local station: **Nanjing**for **DNV GL**Approval Engineer: **Maik Gagern**

Arne Schaarmann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Self regulating heating cable:

Low temperature

HTLe...C	Tinned copper braid provides additional mechanical protection and a positive ground path.
HTLe...CR	Flame retardant thermoplastic outer jacket protects against certain inorganic chemical solutions, it also protects against abrasion and impact damage.
HTLe...CT	High-Temperature Fluoropolymer outer jacket is used for exposure to organic or corrosive solutions or vapors may be present.
HTR...C	Tinned copper braid provides additional mechanical protection and a positive ground path.
HTR...CR	Flame retardant thermoplastic outer jacket protects against certain inorganic chemical solutions, it also protects against abrasion and impact damage.
HTR...CT	High-Temperature Fluoropolymer outer jacket is used for exposure to organic or corrosive solutions or vapors may be present

Medium temperature

HTP...C	Tinned copper braid provides additional mechanical protection and a positive ground path.
HTP...CR	Flame retardant thermoplastic outer jacket protects against certain inorganic chemical solutions, it also protects against abrasion and impact damage.
HTP...CT	High-Temperature Fluoropolymer outer jacket is used for exposure to organic or corrosive solutions or vapors may be present.

High temperature

HTS...C	Tinned copper braid provides additional mechanical protection and a positive ground path.
HTS...CT	High-Temperature Fluoropolymer outer jacket is used for exposure to organic or corrosive solutions or vapors may be present.

Application/Limitation

Self regulating trace heating cable

Makers instructions for installation and operation and, as far as applicable, requirements according to the relevant Certificate of Conformity with regard to electrical explosion protection, issued by a recognised Authority, shall be observed.

Type Approval documentation

Tests carried out

Acc. to IECEx Test Report

Marking of product

Maker, Address, Type, Serial No., Year of Construction Ex e IIC Gb, Ex t IIIC Db, Un, P, IECEx LCI 11.0070U.

The equipment shall also bear the usual marking required by the product standard applicable for the product.

Job Id: **262.1-028107-1**
Certificate No: **TAE00002X3**

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

General Remarks

*Note: All details about electrical explosion protection mentioned in this certificate are for information only. For relevant binding information the Certificate of Conformity IECEx LCI 11.0070U shall be observed, which constitutes a component certification. For field installation and coverage of the complete installation a corresponding device certification shall be provided.

END OF CERTIFICATE