Certificate No:
TAE00004M2

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Ladders

with type designation(s)
HTL, HTE

Issued to
Jiangsu Huatong Marine Engineering Equipment Co., Ltd.
Yangzhong, China

is found to comply with
DNV 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.

Material	**Metallic**
Suitable for open deck	**Yes**

Issued at **Høvik** on **2022-12-05**
This Certificate is valid until **2027-12-04**.
DNV local unit: **Nanjing NB & CMC**

Approval Engineer: **Carsten Hunsalz**

for **DNV**

Frederik Tore Elter
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

Cable Ladder type HTE

Widths [mm]: 150, 200, 300, 400, 450, 500, 600, 750, 800, 900, 1000
Height [mm]: 75, 100, 150
Thickness[mm]: 1.5; 2
Standard length [m] : 3

HTE Stainless steel Classification according to IEC 61537:

6.1 Material:	Metallic
6.2 Flame propagation:	Non-flame propagating system
6.3 Electrical continuity:	With electrical continuity characteristics
6.4 Electrical conductivity	Electrical conductive
6.5 Resistance against corrosion:	Class 9D (stainless steel)
6.6 Temperature:	-20°C to 120°C
6.7 Perforation in the base area:	N/A
6.8 Free base area:	Classification Y
6.9 Impact resistance	20J at -20°C

HTE Hot Dip Galvanized Carbon steel Classification according to IEC 61537:

6.1 Material:	Metallic
6.2 Flame propagation:	Non-flame propagating system
6.3 Electrical continuity:	With electrical continuity characteristics
6.4 Electrical conductivity	Electrical conductive
6.5 Resistance against corrosion:	Class 6/7/8 (hot dip galvanized)
6.6 Temperature:	-20°C to 120°C
6.7 Perforation in the base area:	N/A
6.8 Free base area:	Classification Y
6.9 Impact resistance	20J at -20°C

Cable Ladder type HTL

Widths [mm]: 150, 200, 300, 400, 450, 500, 600, 750, 800, 900, 1000
Height [mm]: 75, 100, 150
Thickness[mm]: 1.5; 2
Standard length [m] : 3

HTL Stainless steel Classification according to IEC 61537:

6.1 Material:	Metallic
6.2 Flame propagation:	Non-flame propagating system
6.3 Electrical continuity:	With electrical continuity characteristics
6.4 Electrical conductivity	Electrical conductive
6.5 Resistance against corrosion:	Class 9D (stainless steel)
6.6 Temperature:	-20°C to 120°C
6.7 Perforation in the base area:	N/A
6.8 Free base area:	Classification Y
6.9 Impact resistance	20J at -20°C

HTE Hot Dip Galvanized Carbon steel Classification according to IEC 61537:

6.1 Material:	Metallic
6.2 Flame propagation:	Non-flame propagating system
6.3 Electrical continuity:	With electrical continuity characteristics
6.4 Electrical conductivity	Electrical conductive
6.5 Resistance against corrosion:	Class 6/7/8 (hot dip galvanized)
6.6 Temperature:	-20°C to 120°C
6.7 Perforation in the base area:	N/A
6.8 Free base area:	Classification Y
6.9 Impact resistance	20J at -20°C

Application/Limitation

To be installed in accordance with the manufacturer's instructions and DNV rules.

Suitable for open deck

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 61537:2006.

Marking of product

Manufacturer – Type designation – Type - Width – Height – Length – Lot no.

Periodical assessment

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

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- 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.

END OF CERTIFICATE