

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Power Cable

with type designation(s)
CJPF86/NSC & CJPF96/NSC 0,6/1 kV

Issued to

Jiangsu Hengtong Wire & Cable Technology Co., Ltd
Suzhou, China

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

General power and lighting

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Voltage class (kV) 0,6/1
Temp. class (°C) 90

This Certificate is valid until **2020-10-13**.

Issued at **Høvik** on **2015-10-14**

DNV GL local station: **Shanghai**

Approval Engineer: **Georgy Abramenko**

for **DNV GL**

Marit Laumann
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

Type: **CJPF86/NSC & CJPF96/NSC 0,6/1 kV**

Construction:

Conductors: Plain or Tinned stranded copper Class 2
Core insulation: Mica tape + XLPE
Inner covering: PET tape
Inner sheath: SHF1
Metal covering: Plain or tinned Copper wire braid or
Galvanized steel wire braid (multicore cables only)
Outer sheath: SHF1

Number of cores	Cross sectional area
1	1,0 - 300
2	1,0 - 120
3	1,0 - 185
4	4 - 50
4 5 7 10 12 14 16 19 24 27 30 33 37	1,0 1,5 2,5

Application/Limitation

This type of cable is fire resistant in accordance with IEC Publication 60331.

The requirements of SOLAS Amendments Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bunches of Cables or Wires) are fulfilled without any additional measures.

Type Approval documentation

Tests carried out

Standard	Release	General description	Limitation
IEC 60092-350	2014-08	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	
IEC 60092-360	2014-04	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	
IEC 60092-353	2011-08	Single and multicore non-radial field power cables with extruded solid insulation for rated Voltages of 1 kV and 3 kV	
IEC 60331-1/2	2009-05	Fire resistance / Circuit integrity – Test for method for fire with shock at temperature of at least 830°C for cables rated up to and including 0,6/1 kV	Minimum 90 min
IEC 60332-3-22	2009-02	Tests on electric and optical fibre cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A	Bunch test Category A
IEC 60754-1	2011-11	Test on gases evolved during combustion of materials from cables – Determination of the amount of halogen acid gas	Low Halogen

Job Id: **262.1-009480-2**
Certificate No: **TAE00000HT**

Standard	Release	General description	Limitation
IEC 60754-2	2011-11	Test on gases evolved during combustion of materials from cables – Determination of the degree of acidity of gases evolved during the combustion of materials taken from electric cables by measuring pH and conductivity	Halogen free
IEC 61034-1/2	2005-04	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke

Marking of product

JIANGSU HENG TONG WIRE & CABLE TECHNOLOGY– CJPF86/NSC or CJPF96/NSC – size – 0,6/1 kV – IEC 60331 – IEC 60332-3-22 – Batch number.

Periodical assessment

The scope of the retention/renewal survey 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 (where practicable)
- Check test reports from Production Sample Tests (PST) and Routine tests (RT)
- If test reports are not available, tests according to PST and RT shall 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.

Survey to be performed at least every second year.

END OF CERTIFICATE