



Certificate no.:
TAE0000576

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **High Voltage Cable**

with type designation(s)

RUOU, RUCU, RUOU, RUCU, RUOU, RUCU, RUOU, RUCU

issued to

Lynxeo (Suzhou) Cable Technology Co., Ltd.
Suzhou, Jiangsu, China

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Type	Rated voltage (kV)	Temp. class (°C)
RUOU, RUCU	3.6/6	90
RUOU, RUCU	6/10	90
RUOU, RUCU	8.7/15	90
RUOU, RUCU	12/20	90

Issued at **Høvik** on **2026-03-10**

This Certificate is valid until **2031-03-09**.

for **DNV**

DNV local unit: **Shanghai**

Approval Engineer: **Georgy Abramenko**

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 USD 300 000.

Product description

Type: RUOU or RUCU 3.6/6 kV
RUOU or RUCU 6/10 kV
RUOU or RUCU 8.7/15 kV
RUOU or RUCU 12/20 kV

Construction:	
Conductors:	Tinned, stranded copper class 2 or class 5
Conductor screen:	Semi conducting material
Core insulation:	EPR
Insulation screen:	Semi conducting material and tinned copper wire
Inner sheath:	Halogen-free compound SHF2
Armour:	RUOU: Tinned copper wire braid RUCU: Galvanized Steel wire braid (except single core cable)
Outer sheath:	Halogen-free compound SHF2 or SHF MUD Sheath code no marking: Minimum requirement E: Enhanced oil resistant – category b M: Enhanced oil resistant – category b & mud resistant – category c H: Enhanced oil resistant – category b & hydraulic/gear oil resistant – category d H-M: Enhanced Oil resistant – category b & c & d

Single core:	
Voltage U_0 / U [kV]	
3.6/6 kV	16 25 35 50 70 95 120 150 185 240 300 400
6/10 kV	16 25 35 50 70 95 120 150 185 240 300 400
8.7/15 kV	25 35 50 70 95 120 150 185 240 300 400
12/20 kV	35 50 70 95 120 150 185 240 300 400
Multicore 3C:	
Voltage U_0 / U [kV]	
3.6/6 kV	16 25 35 50 70 95 120 150 185 240
6/10 kV	16 25 35 50 70 95 120 150 185 240
8.7/15 kV	25 35 50 70 95 120 150 185
12/20 kV	35 50 70 95 120 150 185
Multicore 3C + 1E earthing conductor	
Voltage U_0 / U [kV]	
3.6/6 kV	3x25+16E 3x35+16E 3x50+25E 3x70+35E 3x95+50E 3x120+70E 3x150+95E
6/10 kV	3x25+16E 3x35+16E 3x50+25E 3x70+35E 3x95+50E 3x120+70E 3x150+95E
8.7/15 kV	3x25+16E 3x35+16E 3x50+25E 3x70+35E 3x95+50E 3x120+70E 3x150+95E
Multicore 3C + 3E earthing conductors	
Voltage U_0 / U [kV]	
12/20 kV	3x35+3x10E 3x50+3x10E 3x70+3x16E 3x95+3x25E 3x120+3x25E 3x150+3x35E 3x185+3x35E

Application/Limitation

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.

Power.

Flame retardant Cat A. Halogen free. Low smoke.

Tests carried out

Standard	Release	General description	Limitation
IEC 60092-350	2020-01	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	

Standard	Release	General description	Limitation
IEC 60092-354	2020-02	Single- and three-core power cables with extruded solid insulation for rated voltages 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV)	
IEC 60092-360	2021-01	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables.	
IEC 60332-1-2	2025-06	Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame	
IEC 60332-3-22	2018-07	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	Charred portion of sample does not exceed 2,5m above bottom edge of burner.
IEC 60754-1	2019-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2019-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 60684-2	2025-06	Flexible insulating sleeving – Part 2: Methods of test Clause 47.1 Methods of determination of low levels of chlorine, and/or Bromine and/or iodine Clause 47.2 Methods of determination of low levels of fluorine	HF max 0,1% [0,02% can be detected]
IEC 61034-1/2	2019-11	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%
IEC 60079-14 Annex E	2014-05	Restricted breathing test for cables	
NEK TS 606	2025	Cables for offshore installations. Halogen-free and/or mud resistant. Technical specification.	Mud resistance test on SHF Mud: IRM902, IRM903 100 C 7d. Calcium Bromide 70 C 56d. Oil based mud: EDC 95/11 70 C 56d
CSA C 22.2 No.03	2009	Test methods for electrical wires and cables	Cold bending: -40°C Cold impact: -35°C
ANSI/UL 1581	2023	Reference Standard for Electrical Wires, Cables, and Flexible Cords	Sunlight resistant: 720hrs

Marking of product

3.6/6 kV RUOU or RUCU, or 6/10 kV RUOU or RUCU, or 8.7/15 kV RUOU or RUCU, or 12/20 kV RUOU or RUCU - size – LYNXEO 448 - IEC 60332-3-22

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.



Job ID: **262.1-043604-1**
Certificate no.: **TAE0000576**

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.

Manufactured by:

Lynxco (Suzhou) Cable Technology Co. Ltd.

No.1588 Songwei Road, Wuzhong Economic and Technological Development Zone, Suzhou, Jiangsu Province, China.

END OF CERTIFICATE