

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Electric Power Cable**with type designation(s)
UX P15 0,6/1kV

Issued to

Tele-Fonika Kable S.A.
Myslenice, Poland

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards
IEC 60092-353 (2016-09)
IEC 60332-3-22 (2009-02)
IEC 60754-1/2 (2011-11)
IEC 61034-1/2 Ed. 3.1 (2013-06)
NEK TS 606 (2009-05)**Application :****Earth conductor.****Flame retardant in bunch Cat. A. Halogen free. Low smoke.****Mud resistant.****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**Issued at **Høvik** on **2017-05-31**This Certificate is valid until **2019-06-30**.for **DNV GL**DNV GL local station: **Katowice**Approval Engineer: **Ivar Bull**

Andreas Kristoffersen
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 : UX P15 0,6/1kV to be used as yellow/green earth conductor

Construction:

Conductors: Circular tinned stranded copper conductor class 2 or class 5
Core insulation: SHF2

No of cores x conductor cross-section mm ²
1X6
1X10
1X16
1X25
1X35

No of cores x conductor cross-section mm ²
1X50
1X70
1X95
1X120
1X150

No of cores x conductor cross-section mm ²
1X185
1X240
1X300
1X630

Application/Limitation

The requirement of SOLAS Chapter II-1 Part D Reg.45, 5.2 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 60092-353	2011-08	Electrical installations in ships - Part 353: Power cables for rated voltages 1 kV and 3 kV	0,6/1 kV
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 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	Charred portion of sample does not exceed 2,5m above bottom edge of burner.
IEC 60754-1	2011-11	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	2011-11	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 61034-1/2	2005-04	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%

Job Id: **262.1-015972-3**
Certificate No: **TAE00001WR**

Standard	Release	General description	Limitation
NEK 606 Ed. 4	2009-05	Cables for offshore installations. Halogen-free and/or mud resistant. Technical specification.	Mud resistance test: IRM903 100°C 7d. Calcium Bromide 70°C 56d. Carbo Sea 70°C 56d or EDC 95/11 70°C 56d

Marking of product

TF KABLE 3 – UX P15 - 0,6/1kV – Size – 60332-3-22 – Lot No.

Periodical assessment

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

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Check of the results from Production Sample Tests (PST) and Routine Tests(RT) (if not available, PST and RT are to be carried out)
- Review of type approval documentation
- Review of possible changes in design, material and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate

Periodical assessment is to be performed at least every second year.

END OF CERTIFICATE