DNV·GL

Certificate No:
**TAE000031Z**

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Switchboard wire**

with type designation(s)
**P15 UX, P108, 0,6/1 kV**

Issued to
**TriCab (USA) Inc.**
**Worcester, MA, USA**

is found to comply with
**DNV GL rules for classification – Ships, offshore units, and high speed and light craft**

## Application :

**Switchboard wire**

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

Issued at **Høvik** on **2019-01-23**
This Certificate is valid until **2023-06-30**.
DNV GL local station: **New York**

Approval Engineer: **Ivar Bull**

for **DNV GL**

**Marta Alonso Pontes**
**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.


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Job Id: **262.1-009092-5**
Certificate No: **TAE000031Z**

## Product description

P15 UX, P108, 0,6/1 kV (UPM)

| | |
|---|---|
| Conductor | Tinned copper class 2 or class 5. |
| Insulation | SHF2 |

| No of cores: | Cross sectional area [mm$^{2}$] |
|---|---|
| 1 | 1 to 630 |

## 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.

Only to be used as yellow green earth wire.

## 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 | 2016-09 | Electrical installations in ships - Part 353: Power cables for rated voltages 1 kV and 3 kV | |
| IEC 60332-3-23 | 2009-02 | Tests on electric and optical fibre cables under fire conditions – Part 3-23: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category B | Bunch test<br>Category B |
| NEK TS 606 Ed5 | 2016 | Cables for offshore installations. Halogen-free and/or mud resistant. Technical specification. | Mud resistance test:<br>IRM903 100°C 7d.<br>Calcium Bromide 70°C 56d.<br><u>Oil based mud:</u><br>EDC 95/11 70°C 56d or CarboSea 70°C 56d |

## Marking of product

TriCab (USA) – P15 UX, P108 – Size – 0,6/1 kV IEC 60332-3-23 – 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) and selected type tests (ref. to applicable class programs) checked (if not available these tests 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.

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