Certificate no.:
TAE000056N

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Electric Power Cable

with type designation(s)
PJA- Aluminium cables 1-5 cores, armoured,
PJC- Aluminium cables 1-5 cores, armoured

issued to
TriCab (Australia) Pty Ltd
PORT MELBOURNE, VICTORIA, **Australia**

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

Application:

Offshore power cables with aluminum conductor. Extruded inner covering. Armoured.
Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Type	Rated voltage (kV)	Temp. class (°C)
PJA- Aluminium cables 1-5 cores, armoured	0,6/1	90
PJC- Aluminium cables 1-5 cores, armoured	0,6/1	90

Issued at **Høvik** on **2026-01-15**
This Certificate is valid until **2031-01-14**.
DNV local unit: **Australia**

for **DNV**

Approval Engineer: **Ivar Bull**

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

Types: PJA- Aluminium cables 1-5 cores, armoured,
PJC- Aluminium cables 1-5 cores, armoured

Construction:

Conductors:	Stranded aluminum class 5.
Core insulation:	HEPR
Inner covering	Extruded halogen free compound
Braid:	Tinned Copper braid
Outer sheath:	SHF 1 or SHF2

No of cores:	Cross sectional area [mm$^{2]}$
1 to 5	50, 70, 95, 120, 150

*) Aluminium class 5 conductor as specified in IEC 60228 (2004) for copper class 5.

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.

Terminations shall be installed by competent persons according to Tricab Installation guide.

To prevent ingress of moisture into termination, heat shrink tubing with melt glue shall be installed over barrel of termination and cover minimum 50mm of cable sheath.

Cable shall be terminated with DNV type approved Tricab shear bolt termination lugs designed and tested for aluminium conductors, ref. DNV TA certificate **TAE00004VW.**

Shear bolt termination lug B10-ACXX/10H50 for 50 mm2 aluminum power cable. Bolt size M10
Shear bolt termination lug B10-ACXX/12H50 for 50 mm2 aluminum power cable. Bolt size M12
Shear bolt termination lug B10-ACXX/10H95 for 70/95 mm2 aluminum power cable. Bolt size M10
Shear bolt termination lug B10-ACXX/12H95 for 70/95 mm2 aluminum power cable. Bolt size M12
Shear bolt termination lug B10-ACXX/10H150 for 120/150 mm2 aluminum power cable. Bolt size M10
Shear bolt termination lug B10-ACXX/12H150 for 120/150 mm2 aluminum power cable. Bolt size M12

Current carrying capacities for aluminum cables are listed in DNV Rules Pt4 Ch8 Sec 2 Electrical installations.

Type Approval documentation

Tests carried out

Standard	Release	General description	Limitation
DNV CP-0399	2021-08	Electric cables.	
DNV-CP-0409	2021-09	Class Programme for terminal lugs for LV power cables with aluminium conductors	
IEC 60092-350	2020-01	Electrical installations in ships - Part 350: General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	
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 60092-353	2024-06	Electrical installations in ships - Part 353: Power cables for rated voltages 1 kV and 3 kV	
IEC 60228	2004-11	Conductors of insulated cables	For reference only.

Standard	Release	General description	Limitation
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	Flame retardant small scale. Distance between the lower edge of the top support and the onset of charring > 50 mm and charring not to extend downwards > 540 mm from the lower edge of the top support.
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 1: Determination of the halogen acid gas content	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2019-11	Measurement of smoke density of cables burning under defined conditions – Part 1: Test apparatus Part 2: Test procedure and requirements	Low smoke Light transmittance >60%

Marking of product

Tricab PJA – size - 0,6/1 kV ALIFLEX – IEC 60092-353 - IEC 60332-3-22 – TR Lot No.
Tricab PJC – size - 0,6/1 kV ALIFLEX – IEC 60092-353 - IEC 60332-3-22 – TR 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