

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Clamps

with type designation(s)
SmartCleat Trefoil and Single

Issued to

Øglænd System AS
KLEPPE, Norway

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

Application :

For fixing of cables on board Mobile Offshore Units and Ships.

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

This Certificate is valid until **2021-12-31**.

Issued at **Høvik** on **2017-01-02**

DNV GL local station: **Stavanger**

Approval Engineer: **Nicolay Horn**

for **DNV GL**

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.

Job Id:
Certificate No: **TAE00001KB**

Product description

Type name: SmartCleat.

Cable cleats made of stainless steel, EN 1.4404, for fixing trefoil and single cables.

Classification	According to IEC 61914
Material	Metallic
Max and min temperature	+120°C -60°C
Resistance to impact	Very Heavy
Resistance to electromechanical forces	Lateral and axial retention, withstanding more than one short circuit.
Resistance to corrosion	High

Art. No.	Type	Cable Size (outer diameter)
13034XX*	SmartCleat Trefoil	3x25 mm to 3x99 mm
898XX*	SmartCleat Single	1x37 mm to 1x99 mm

*) XX = outer cable diameter

Application/Limitation

Maximum tested peak current for cleat size 3x36 and 300 mm spacing: 174 kA. For distance between cable cleats refer to manufacturer's spread sheet "Calculation of distance between SmartCleats".

For fixing single core AC current cables on board Mobile Offshore Units and Ships then each cable cleat shall include all phases.

Type Approval documentation

Tests carried out

Type tests according to IEC 61914:2015 (Axial load test is carried out in room temperature.)

Marking of product

Marked with Øglænd logo and product identification

Periodical assessment

The scope of the periodic assessment 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 assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- 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.

Assessment to be performed at 2 and 3,5 year.

END OF CERTIFICATE