DNV·GL

Certificate No:
TAK00001N1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Synthetic Fibre Ropes

with type designation(s)
Macromolecule Polyethylene 12-strand Fibre Ropes

Issued to
Yancheng Shenli Rope-Making Co., Ltd.
Yancheng, China

is found to comply with
DNV GL class programme DNVGL-CP-0100 – Type approval – Synthetic fibre ropes for towing, mooring and anchoring

Application :

Mooring and towing of ships, boats and high speed light craft.

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

Issued at **Høvik** on **2019-06-26**
This Certificate is valid until **2024-06-25**.
DNV GL local station: **Shanghai**

Approval Engineer: **Gisle Hersvik**

for **DNV GL**

Rikard Törnqvist
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: **262.1-010923-5**
Certificate No: **TAK00001N1**

Product description

Macromolecule Polyethylene Fibre Ropes, 12-strand synthetic fibre ropes.
- Fibre material: HMPE
- Specific gravity: 0.97 (floats in seawater)
- Elongation at break: 4 %

ROPE CHARACTERISTICS 12-strand Macromolecule Polyethylene Fibre Ropes		
Diameter, [mm]	**Nominal linear mass, [g/m]**	**Minimum Breaking Force (MBF), [kN]**
28	410	500
32	530	630
36	676	820
40	830	945
44	1 016	1 040
48	1 200	1 270
52	1 420	1 530
56	1 640	1 790
60	1 890	2 330
64	2 140	2 350
72	2 700	2 910
80	3 350	3 480
88	4 050	4 200
96	4 820	5 120
104	5 660	5 820

Fibre ropes are to be delivered with a linear mass within ± 5 % of the nominal linear mass given in the table.

Application/Limitation

The Type Approval covers ropes with diameter from 28 mm to and including 104 mm.

The scope of assessment is limited to evaluation of net mass pr metre, type of lay and static strength.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**, according to:
- ISO 2307:2010, Fibre ropes -- Determination of certain physical and mechanical properties.

The fibre rope is manufactured in accordance with Yan Cheng Shenli Rope Making Factory Co., Ltd. standard Q/320925YS 002-2010 “”*Macromulecule polyethylene 12-strand rope*”.

Initial setting/cycling of ropes and testing of break strength are carried out in accordance with ISO 2307.

Marking of product

Product shall be marked with *manufacturer’s name*; **Yancheng Shenli Rope-Making Co., Ltd., China** and *type designation*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV GL Type Approval Certificate.

Periodical assessment

The scope of the Periodical 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.

Periodical Assessment to be performed after 2 and 3.5 years (Certificate Retention) and at renewal after 5 years (Certificate Renewal).

The main elements of the Periodical Assessment are to:

- Ensure that **Type Approval documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Approval documentation** and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and the DNV GL Type Approval Certificate.

END OF CERTIFICATE