

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Synthetic Fibre Ropes**

with type designation(s)
**Polyamide 12-strand and
Polyamide Multi-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
ISO 1140:2012 "Fibre ropes – Polyamide – 3-, 4-, 8- and 12-strand ropes"**

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**for **DNV GL**Approval Engineer: **Gisle Hersvik**

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**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.



Product description

Polyamide Ropes; 12-strand and Multi-strand synthetic fibre ropes.

- Fibre material: Polyamide
- Specific gravity: 1.14 (sinks in seawater)
- Elongation at break: 15 %

ROPE CHARACTERISTICS 12-strand / Multi-strand Polyamide Ropes		
Diameter, [mm]	Nominal linear mass, [g/m]	Minimum Breaking Force (MBF), [kN]
28	484	149
30	556	170
32	632	192
36	800	240
40	987	294
44	1 190	351
48	1 420	412
52	1 670	479
56	1 930	550
60	2 220	627
64	2 530	709
72	3 200	887
80	3 950	1 080
88	4 780	1 300
96	5 690	1 530
104	6 670	1 780
112	7 740	2 050
120	8 880	2 340
128	10 100	2 650
136	11 400	2 980
144	12 800	3 320
160	15 800	4 060

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 160 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 ISO 1140:2012(E) "*Fibre ropes - Polyamide - 3-, 4- and 8-strand ropes*".

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

Job Id: **262.1-010923-4**
Certificate No: **TAK00001MZ**

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