DNV·GL

Certificate No:
TAK00001N0

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Synthetic Fibre Ropes

with type designation(s)
Polyester 3-strand,
Polyester 8-strand,
Polyester 12-strand and
Polyester 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 1141:2012 "Fibre ropes – Polyester – 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**

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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Product description

Polyester Ropes; 3-, 8-, 12- and Multi-strand hawser-laid and braided synthetic fibre rope.

Polyester Ropes; 3-strand hawser-laid synthetic fibre rope.
- Fibre material: Polyester
- Specific gravity: 1.38 (sinks in seawater)
- Elongation at break: 11.5 %

ROPE CHARACTERISTICS **3-strand hawser-laid rope**		
Diameter, **[mm]**	**Nominal linear mass,** **[g/m]**	**Minimum Breaking Force (MBF),** **[kN]**
6	27,3	6,08
8	48,5	10,5
9	61,4	13,2
10	75,8	16,2
12	109	23,0
14	149	30,9
16	194	39,8
18	246	49,9
20	303	61,0
22	367	73,1
24	437	86,1
26	512	101
28	594	116
30	682	132
32	776	150
36	982	188
40	1 210	230
44	1 470	276
48	1 750	326
52	2 050	380
56	2 380	437
60	2 730	500
64	3 100	566

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

Polyester Ropes; 8-, 12- and Multi-strand hawser-laid and braided synthetic fibre rope.
- Fibre material: Polyester
- Specific gravity: 1.38 (sinks in seawater)
- Elongation at break: 11.5 %

ROPE CHARACTERISTICS **8- , 12- and Multi-strand braided ropes**		
Diameter, **[mm]**	**Nominal linear mass,** **[g/m]**	**Minimum Breaking Force (MBF),** **[kN]**
28	594	116
30	682	132
32	776	150
36	982	188
40	1 210	230
44	1 470	276
48	1 750	326
52	2 050	380
56	2 380	437
60	2 730	500
64	3 100	566
72	3 930	708
80	4 850	867
88	5 870	1 040
96	6 990	1 230
104	8 220	1 430
112	9 510	1 650
120	10 900	1 880
128	12 400	2 130
136	14 000	2 390
144	15 700	2 670
160	19 400	3 260

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 6 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 1141:2012(E) "*Fibre ropes – Polyester – 3- 4- and 8-strand ropes*".

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