

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Synthetic Fibre Ropes**with type designation(s)
3- and 8-strand Polyester Ropes

Issued to

Jiuli Rope Co., Ltd
YANGAHOYU JIANGSU, 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 and HSLCs and Anchoring of HSLCs.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2021-09-01**.Issued at **Høvik** on **2016-09-02**DNV GL local station: **Nanjing**Approval Engineer: **Helene Bjerke**for **DNV GL**

Martin Strande
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

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

- Specific gravity: **1.38** (non-buoyant)

ROPE CHARACTERISTICS 3-strand hawser-laid rope		
Diameter, mm	Nominal linear mass, kg/m	Minimum Breaking Load (MBL), kN
6	0,0273	6,08
8	0,0485	10,5
9	0,0614	13,2
10	0,0758	16,2
12	0,109	23,0
14	0,149	30,9
16	0,194	39,8
18	0,246	49,9
20	0,303	61,0
22	0,367	73,1

ROPE CHARACTERISTICS 8-strand braided ropes		
Diameter, mm	Nominal linear mass, kg/m	Minimum Breaking Load (MBL), kN
20	0,303	61,0
22	0,367	73,1
24	0,437	86,1
26	0,512	101
28	0,594	116
30	0,682	132
32	0,776	150
36	0,982	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

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

Application/Limitation

The Type Approval covers ropes with diameter from 6 mm to and including 120 mm.

Scope of assessment is limited to evaluation of net mass per metre, type of lay and static strength.

Type Approval documentation

- 1.
- 2.

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- 3.

Tests carried out

Type Testing carried out according to **Type Approval documentation**, and according to:

- ISO 2307:2010

Initial setting/cycling of ropes has not been carried out prior to break testing.

The fibre rope is manufactured in accordance with ISO 1141:2004 "Fibre ropes – Polyester – 3-, 4- and 8-strand ropes".

Marking of product

Product shall be marked with *manufacturer's name*; **Jiuli Rope Co., Ltd., China**, *production plant* and *type designation* and *diameter*.

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.

Assessment to be performed after 2.5 years (Certificate Retention) and at renewal after 5 years (Certificate Renewal).

The main elements of the Periodical Assessment are:

- 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