

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Synthetic Fibre Ropes**with type designation(s)
3- and 8-strand HMPE 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 1346:2012 "Fibre ropes – Polypropylene split film, monofilament and multifilament (PP2) and polypropylene high-tenacity multifilament (PP3) – 3-, 4-, 8- and 12-strand ropes"****Application :****Mooring and Towing of Ships and HSLCs.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2021-08-30**.Issued at **Høvik** on **2016-08-31**for **DNV GL**DNV GL local station: **Nanjing**Approval Engineer: **Helene Bjerke**

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

High Modulus PolyEthylene (HMPE) Ropes; 8- and 12-strand braided synthetic fibre ropes.
- Specific gravity : 0,98 (floats in seawater)

ROPE CHARACTERISTICS			
Diameter, mm	Nominal linear mass, kg/m	Minimum Breaking Load (MBL),	
		kN (unspliced rope)	kN (rope with eye spliced terminations)
6	0,0230	36,7	33,0
8	0,0400	65,3	58,7
10	0,0610	102	92,0
12	0,0870	147	132
14	0,117	200	180
16	0,151	260	235
18	0,190	310	283
20	0,232	380	340
22	0,281	450	400
24	0,331	520	470
26	0,384	600	540
28	0,445	680	610
30	0,506	770	690
32	0,575	870	780
34	0,648	960	860
36	0,720	1 040	940
38	0,798	1 160	1 040
40	0,881	1 260	1 130
44	1,060	1 460	1 310
48	1,250	1 700	1 530
52	1,460	1 970	1 770
56	1,690	2 260	2 030
60	1,930	2 530	2 280
64	2,200	2 840	2 560
68	2,480	3 170	2 850
72	2,780	3 520	3 170
76	3,090	3 890	3 500
80	3,430	4 300	3 870
88	4,170	5 200	4 680
96	4,970	6 180	5 560

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 96 mm.

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

Type Approval documentation

- 1.
- 2.



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 10325:2009 "Fibre ropes - High modulus polyethylene - 8-strand braided ropes, 12-strand braided ropes and covered 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