

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Synthetic Fibre Ropes**with type designation(s)
3-, 8- and 12-strand Polyester Ropes

Issued to

Juli Sling Co., Ltd.
Baoding City, Hebei, 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.**Issued at **Hamburg** on **2019-04-04**This Certificate is valid until **2024-04-03**.for **DNV GL**DNV GL local station: **Tianjin**Approval Engineer: **Joachim Rehbein**

Thorsten Lohmann
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 (sinks in seawater).

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- and 12-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 ± 5 % of the nominal linear mass given in the table.

Job Id: **262.1-018874-2**
Certificate No: **TAK00001KC**

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

Tests carried out

Type Testing carried out in accordance with **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 1141:2012 "Fibre ropes – Polyester – 3-, 4-, -8 and 12-strand ropes".

Marking of product

Product shall be marked with *manufacturer's name*; **Juli Sling Co., Ltd. Baoding, Hebei, China**, *production plant* and *type designation* and *diameter*.

Additionally, the rope shall be marked using one blue yarn along in one of the visible strands.

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.

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Periodical assessment

A condition for retention of the TA certificate in its validity period is that periodical assessments are successfully carried out.

The objective of the periodical assessment is to verify that the conditions for the TA have not been altered.

The main scope of the periodical assessment will normally include:

- verification of the TA applicant's production and quality system with relation to ensuring continued consistent production of the type approved products at the TA applicant's own premises and at other companies that are given the responsibility for manufacturing of the products
- review of the TA documentation and that this is still used as basis for the production
- review of possible changes to the design, the material and the performance of the product
- verification of the product marking.

Periodical assessments will be required after two years and after 3.5 years (retention survey) and for renewal after 5 years (renewal survey).

END OF CERTIFICATE