

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001UA
Revision No:
1

This is to certify:

That

Usha Martin Limited
(Wire and Wire Ropes Division) Ranchi, Jharkhand, India

is an approved manufacturer of
Steel Wire Ropes

in accordance with
DNVGL-OS-E304 – Offshore mooring steel wire ropes, Edition July 2020
DNV GL rules for classification – Ships

and the following particulars:

Product **Steel wire ropes for ship towlines and mooring lines**
 Steel wire ropes for mobile offshore mooring
Construction **See pages 2 and 3**
Max. Diameter **See pages 2 and 3**

Manufacturer approved by this certificate is accepted to deliver according to DNV GL, DNV and GL rules. Materials to be applied to DNV GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Høvik** on **2021-02-16**

This Certificate is valid until **2024-01-03**.

for **DNV GL**

DNV GL local station: **Mumbai NB & CMC**

Approval Engineer: **Shylate Mahachi**

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Sondre Løken
Head of Section

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Job Id: **263.11-004325-3**
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Particulars of the approval

Steel wire ropes for ship towlines and mooring lines

Rope group	Rope construction	Core type	Rope grade [N/mm ²]	Max. Diameter [mm]
6x7	6x7	FC	1770, 1960, 2160, IPS, EIP, EEIP	40
6x19	6x19S	FC, WSC, IWRC	1770, 1960, 2160, IPS, EIP, EEIP, TITAN, STITAN, TITANMAX	64
	6xk19S			
	6x25F			
	6xk25F			
	6x19W			
	6x26WS			
	6xk26WS			
6x24	6x24S	FC	1570, 1770, 1960, IPS, EIP	40
	6x24			
6x37	6x37	FC, WSC, IWRC	1570, 1770, 1960	107

Steel wire ropes for mobile offshore mooring

Rope group	Rope construction	Core type	Rope grade [N/mm ²]	Max. Diameter [mm]
6x36	6x31WS	FC, WSC, IWRC	1770, 1960, 2160, IPS, EIP, EEIP, TITAN, STITAN, TITANMAX	101
	6xk31WS			
	6x36WS			
	6xk36WS			
	6x41WS			
	6xk41WS			
	6x47WS			
	6xk47WS			
	6x46WS			
	6xk46WS			
	6x49WS			
	6xk49WS			
	6x52WS			

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Rope group	Rope construction	Core type	Rope grade [N/mm²]	Max. Diameter [mm]
6x61	6x61WS	IWRC	1770, 1960, 2160, IPS, EIP, EEIP	127
	6x61kWS			
Spiral strand ²⁾	1x156	-	1370, 1470, 1570, 1770	66.5
Full-locked coil ²⁾	-	-	1370, 1470, 1570, 1770	95

Remarks:

- 1) Rope classification as per ISO 17893 or API 9A.
- 2) Minimum breaking load shall be according to governing rope specification or customer requirement
- 3) Wire rods supplied by Tata Steel Long Products Limited, Phase – V, Adityapur Industrial Area, Gamaharia, Seraikela-Kharsawan, Jharkand 832108, India.