

**FORM A OCIMF GUIDELINES FOR THE PURCHASING AND TESTING OF SPM HAWSERS
COMPLIANCE CERTIFICATE**

Date: 04-April-2018

Rope Manufacturer: DSR Corp
 Address: 7, Noksansaneopjung-ro, 192beon-gil, Gangseo-gu, Busan, Koera
 Rope Design Designation: NY PL12 (SPM)
 Material Type (nylon, polyester, etc.): Nylon
 Material Description (or mfg's code): Nylon 6.6
 Rope Structure (8-strand, double braid, etc.): 12 Parallel Strand (3-Strand Sub Rope) with Protective Jacket
 Maximum Rope Size to be Made: 21 Wight / Unit Length: 17,900 g/m

Prototype Rope Production

Plant Location: Busan, Korea Quantity Produced Date: 05-March-2018
 Quality Control Supervisor: Kyung-Wook Kang
 Name of Independent Inspector: Dong-Hyuk Park
 Inspector Company: ABS
 Address: #22, 6th Floor, DK Building 6-12, Jungang-daero 180beon-gil, Dong-gu, Busan, Republic of Korea

Certified by Independent Inspector (indicate Yes or No if listed requirements have been reviewed)

Rope Design Specification?:	Yes	Material Specification?:	Yes
Manufacturing Specification?:	Yes	Splicing Instructions?:	Yes
Quality Assurance Manual?:	Yes	Quality Control Report?:	Yes
Yarn Quality Testing?:	Yes	Rope/Yarn Strength Ratio Determination?:	Yes

Prototype Rope Testing

Test Facility: 4,000kN / 12,000kN Location: Busan, Korea Date: 21-March-2018
 Test Engineer: Young-Ju Chae / Hyung-il Cho
 Name of Independent Inspector: Dong-Hyuk-Park
 Inspector Company: ABS
 Address: #22, 6th Floor, DK Building 6-12, Jungang-daero 180beon-gil, Dong-gu, Busan, Republic of Korea

Certified by Independent Inspector (enter average test result)

	NDBS	DExt20%	DExt50%	NWBS	WExt20%	WExt50%
Size 21	707.2 tonf	6.07%	10.13%	640.5 tonf	6.27%	11.60%

Certified by Independent Inspector (indicate Yes or No if listed calculations have been reviewed): Yes

Extension at 20% (Ext20%) and 50% (Ext50%) Determination? Yes

Thousand Cycle Load Level (TCLL) Determination? N/A

Rope Size/Strength Power Determination? N/A

Rope/Yarn Strength Ratio Determination? 21": 0.716

Signature/Seal of Independent Inspector

ABS
 BK3460128
 4. APR. 2018



Certification indicates that documents have been reviewed for full compliance and that tests have been witnessed by Independent Inspector.

Compliance and/or certification do not indicate approval and/or certification by OCIMF.



Customer Name	DSR CORPORATION	Purchase Order No.	N/A
Attending Office	Busan Port	Report Number	BK3460128
First Visit Date	28-Feb-2018	Last Visit Date	04-Apr-2018

Certification Of: **Prototype Test for SPM Hawsers NY PL12 (SPM)**

Survey Location : Busan, Korea

Manufacturer DSR CORPORATION
Stamping N/A

This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:

Manufacturer's production processes were generally examined and material flow, control and identification technique found satisfactory.
Manufacturer's quality system and workmanship standards reviewed and considered satisfactory or requested to be modified to suit the particular project requirements.
Principal data verified in accordance with the applicable specification and approved plans, and confirmed to be within acceptable tolerances.
Inspection and testing of machinery/equipment parts and assembly satisfactorily carried out in accordance with the applicable specification.
Testing machines are maintained in satisfactory condition and records of their recheck or calibration dates confirmed.

Description: Prototype Test for SPM Hawsers NY PL12 (SPM)
Rope Size: 21"
Material Specification: Nylon 6.6 Multifilament Yarn
Drawing No: SMP-180212-01
ITP No.: SPM Hawsers NY PL12 (SPM)_REV.0

The prototype tests for SPM Hawsers NY PL12 (SPM) were carried out in accordance with OCIMF Guidelines and manufacturer's specifications as follows and considered satisfactory.

1. Material Test
 - Linear Density
 - Dry & Wet Tenacity
 - Dry & Wet Elongation at Break
 - Yarn on Yarn Abrasion
2. New Dry Breaking Strength Test & Elongation Measurements
3. New Wet Breaking Strength Test & Elongation Measurements
4. Rope/Yarn Strength Ratio

For details, refer to the attached manufacturer's test report Nos. OMC4100/4137/4148/4152.

The Foam A OCIMF Guidelines for the Purchasing and Testing of SPM Hawsers Compliance Certificate was issued and attached to this

NOTE: This report evidences that the survey reported herein was carried out in compliance with one or more of the Rules, guides, standards or other criteria of the American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Report is a representation only that the vessel, structure, item or material equipment, machinery or any other item covered by this Report has been examined for compliance with, or has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping. The validity, applicability and interpretation of this report is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Report or in any notation made in the contemplation of this Report shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.

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report.

**Surveyor(s) to The American Bureau of Shipping
Attending Surveyors**

Lee Hun-Kyung Electronically Signed on 05-Apr-2018 by Park, Dong-Hyuk

Park Dong-Hyuk Electronically Signed on 05-Apr-2018

Reviewed By
Lee, Sung-Deuk Electronically Signed on 06-Apr-2018, Busan Port

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