



March 29, 2024
NS United Kaiun Kaisha, Ltd.

Introduction of Anti-Snap Back mooring ropes to Managed vessels

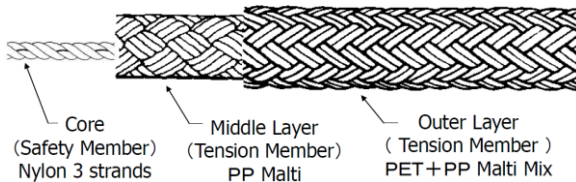
We have been introducing anti-snap back mooring ropes to our managed vessels since January 2024. This mooring rope was developed by Tokyo Seiko Rope MFG. Co., Ltd., which has a close relationship with Nippon Steel Group, in response to our company's safety requirements for mooring operations. Production of this ropes have begun in 2023 and has received type approval from Nippon Kaiji Kyokai (ClassNK).

This mooring rope has a highly elastic nylon core inside the strong base of the mooring rope made of chemical fiber. Even if a break occurs, the core remains and is designed to quietly come out without swinging around. This will also help prevent accidents for crew members when the mooring rope breaks.

We will continue to make efforts to ensure the safety of crew members and the prevention of disasters by installing this technology on managed and owned vessels.

TOUGHLAY FXL-R Construction

【Triple Layer Braided Rope】



< Mooring rope break test >

ClassNK APPROVAL CERTIFICATE
Approval Certificate No. T-230270R
Date: 4 April 2023

PARTICULARS OF APPROVAL
Approval Conditions for Synthetic Fibre Ropes

- Approval No.: T-230270R
- Trade Name: Toughlay FXL-R
- Kind: Double Braided Rope
- Core: Nylon Rope / Polypropylene Rope
- Cover: Polypropylene / Polypropylene Composite Rope
- Grade: Not Applicable
- Number of Strands: See Table 1.
- Raw Textile: See Table 1.
- Specifications: See Table 1 and Table 2.

Table 1 Part of Approval Conditions

No. of Strands	Manufacturer	Brand
3	Tokyo Seiko Rope MFG. Co., Ltd. FIBRE CONSTRUCTION	Nylon Multi Strand 200D
6 or 9	Pong Shu Industrial Co., Ltd. Pong Shu Synthetic Fiber Co., Ltd.	Polypropylene Multi Strand 200D
6 or 9	Dong Sun Synthetic Fiber Co., Ltd.	Polypropylene Multi Strand 200D
Cover	Tsukuba YUKEN POLYESTER YAMAMOTO LIMITED	Polyester Multi Strand 1000D or 2000D

SIPPON KAIJI KYOKAI
Y. Takai
General Manager
Material and Equipment Department

NIPPON KAIJI KYOKAI

Statement of Fact

No. KCEI070794 Date: 4 April 2023

THIS IS TO CERTIFY that the undersigned Surveyor to NIPPON KAIJI KYOKAI (JK), at the request of Mitsui Tokyo Seiko Rope MFG. Co., Ltd., attended the tests made in order to confirm the condition of the fibre rope in break.

Trade Name	Toughlay FXL-R	
Manufacturer	Tokyo Seiko Rope MFG. Co., Ltd. No. 1, Yamamoto, Toyokuni-ku, Osaka, 545-0291, Japan	
Intention of Application	Mooring	
Core	1. No. of Strands	3
	2. Intention of Use	Double Braided Rope
Cover	1. Intention of Use	Double Braided Rope
	2. Intention of Use	Double Braided Rope
Class	Double Braided Rope	
Class No.	JK-01	
Class Name	Double Braided Rope	
Purpose of Use	Mooring	

and certified that the test was carried out in accordance with the attached Test Plan (Ref. No. 2023-04-01) and the test result was verified as attached Test Report (Ref. No. 2023-04-01).

Y. Takai
General Manager
Material and Equipment Department

< ClassNK approval certificate & SOF >
TOUGHLAY FXL-R

For inquiries, please contact:
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