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Certificate No: LR21451784TA Issue Date: 25/11/2021 Expiry Date: 24/11/2026

## **Type Approval Certificate**

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer Mikasa Corporation

**Address** 1, Kuchi, Asa-cho, Asakita-ku, Hiroshima, 731-3362, Japan

**Type** Water Lubricated Propeller Shaft Bearings

**Description** Type-F Full-Mold Type

Type-F-CR Full-Mold Type, Crescent Design

Type-S Segmental Type
Type-T Barrel Type

Type-T-CR Barrel Type, Crescent Design

**Trade Name** FFB (Friction-Free Bearing)

**Application** Marine

**Specified Standard** Lloyd's Register Rules and Regulations for the Classification of Ships July 2021,

Part5, Chapter 6, Section 3

**Ratings** Shaft diameter range: Type-F :40 ~ 450 mm

Type-F-CR :40 ~ 450 mm

Type-S : 200 ~ 1000 mm

Type-T : 200 ~ 1000 mm

Type-T-CR : 200 ~ 1000 mm

Yasushi Sawada

Lead Surveyor to Lloyd's Register Group Ltd A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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**Other Conditions** The length of the bearing is to be not less than twice its 2.0 times the rule

diameter of the shaft in way of the bearing.

The product is to be installed and tested in accordance with the manufacturers

recommendations.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Group Ltd of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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