

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	Eagle Industry Co., Ltd. – Marine Division
Address	2-13-23, Shinhama, Arai-cho, Takasago-city, Hyogo-Pref., 676-0008, Japan
Place of Production	Eagle Industry Co., Ltd. – Marine Division 2-13-23, Shinhama, Arai-cho, Takasago-city, Hyogo-Pref., 676-0008, Japan
Type	Stern tube Seals And Bearings
Description	KEMEL-AIR Seal - Construction fitted with four sealing rings, net stopper in AFT seal and two sealing rings in FWD seal
Trade Name	KEMEL AX "Pollution Free"
Application	Stern tube sealing system for use in ships fitted with suitable oil lubricating systems. Lloyd's Register SCM/*IWS notation.
Specified Standard	Lloyd's Register (LR) Rules and Regulations for the Classification of Ships (July 2020), Part 5, Chapter 6
Ratings	Nominal seal size range : 140 to 1,180 mm Minimum shaft diameter : 111 mm Maximum shaft diameter : 1,130 mm Material of sealing ring : FEPM, FKM (Viton), NBR

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Other Conditions

- 1) Where the seals are intended to be installed in a ship classed or intended to be classed with LR, the stern tube seals are to be found to function to the attending LR Surveyor's satisfaction when fitted and tried under full working conditions.
- 2) The sealing system is to be installed in accordance with the manufacturer's instructions.

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 LR2162235TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.