

Lloyd's Register Type Approval Certificate

This is to certify that the Certificate No. 09/60016 for the undernoted products is extended and renumbered as shown

This certificate is issued to:

PRODUCER	Tides Marine
PLACE OF PRODUCTION	3251A S.W. 13 th Drive Deerfield Beach, Florida 33442 USA
DESCRIPTION	Sure Seal Drive Shaft Seal and Rudder Bearings.
TYPE	Propeller Shaft Seals – FSK Rudder Bearings URB-STD/LP/TS, RPB – A to H, RPB-1
APPLICATION	Shaft Seals for Propeller Shafts Rudder Bearings
SPECIFIED STANDARDS	Rules and Regulations for Classification of Ships Rules and Regulations for Classification of Special Service Craft

Certificate No.	09/60016(E1)
Issue Date	07 August 2012
Expiry Date	03 April 2017
Sheet	1 of 3


Jeremy Vecchione
Lloyd's Register North America Inc.

Lloyd's Register North America Inc.
1000 S. Pine Island Road, Suite 530, Plantation, FL 33324

"Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract."

RATINGS

Propeller Shaft Seals

Model FSK – Sure Seal

Size – 3/4" to 8" (20mm – 205mm)

Maximum Speed 10,000 rpm

Water Temperature range 32° to 90° F.

Rudder Bearings

Model URB –STD/LP/TS

Description Upper Rudder Bearing

Stock Size range 1" to 8" (25mm – 205mm)

Model RPB A to H

Description Rudder Port Bearing & Seals

Stock Size range 1" to 8" (25mm – 205mm)

Model RPB-1

Description Rubber Seal with hose

Size – 3/4" to 3 1/2" (20mm – 90mm)

OTHER CONDITIONS

1. The product is to be installed in accordance with Manufacturer's recommendations.
2. The whole of the work is to be carried out to the attending surveyor's satisfaction under the usual conditions of survey and testing.
3. Rudder bearing materials are provisionally approved for 5.5N/mm². Approvals up to 10 N/mm² will be considered based on satisfactory service on Lloyd's Register classed installation.
4. The propeller shaft seals are not be used as the primary sea water seal.

"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 North America Inc. of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. 09/60016(E1) and its supplementary Type Approval Terms and Conditions form part of this Certificate

All other details remain as per the previous Certificate No. 09/60016 to which this extension should be attached.

Certificate No. 09/60016(E1)
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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with. Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register North America, Inc. reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.

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