



Lloyd's Register Type Approval Certificate

This is to certify that the undernoted products have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System, 2002

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
Issue Date	30 November 2009
Expiry Date	3 April 2012
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*

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

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