



### *Confirmation of Product Type Approval*

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 20/JAN/2019. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 13/OCT/2016 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

**Product Name:** Seal, Rudder Seal w/ Hose  
**Model Name(s):** RPB-I

**Presented to:**  
TIDES MARINE INC.  
3251 S.W. 13TH DRIVE  
United States

<b>Intended Service:</b>	Inboard Rudder Stock Sealing unit for new construction or replacement on pleasure and commercial craft.
<b>Description:</b>	A watertight, self aligning seal, precision machined from UHMW. It is a one piece, water-lubricated housing for a nitrile lip seal.
<b>Tier:</b>	3
<b>Ratings:</b>	For Rudder stock sizes of 3/4" - 3 1/2" or 20 mm - 89 mm at water temperatures from 32°F to 90°F.
<b>Service Restrictions:</b>	Unit Certification is not required for this product.
<b>Comments:</b>	1.) The hose material and that of the lip seal is to be suitable for the intended service. The burst pressure of the hose is not to be less than four times the design working pressure. In general, the hose may be installed in a system provided it is visible at all times, easily accessible, and confined to one watertight compartment in conjunction with the provisions of 20.3.3f of the ABS Guide for Building and Classing Motor Pleasure Yachts (February 2000) and the ABS Guide for Building and Classing High-Speed Craft (February 1997). 2.) The equipment should be visually inspected by the attending Surveyor during periodic surveys, with particular attention being given to the flexible hose assemblies and nitrile lip seals. These are to be replaced if deemed necessary. 3.) The manufacturer's recommended installation procedures are to be followed.
<b>Notes / Documentation:</b>	Supporting Documentation: Product Brochure "Rudder Seal Type I" (4 shts); Client

Letter Statement dated 13 Oct. 2011.

**Term of Validity:**

This Product Design Assessment (PDA) Certificate 01-HS109481-3-PDA, dated 14/Oct/2011 remains valid until 13/Oct/2016 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

**ABS Rules:**

2012 Steel Vessels Rules 1-1-4/7.7, 1-1-A3; 2001 ABS Rules for Vessels under 90 m (295 Feet) in Length 4-3-1/15.1, 4-3-2/19.3; 1975 ABS Rules for Aluminum Vessels, Section 32; 1978 ABS Rules for Reinforced Plastic Vessels, Section 18.4; 2001 ABS Guide for High-Speed Craft, 4/7.8; 2000 ABS Guide for Motor Pleasure Yachts Section 19.9 & 20.3.3f.

**National Standards:**

2005 ABYC Recommendations,

**International Standards:**

**Government Authority:**

USCG 46 CFR 58.05-1(a)

**EUMED:**

**Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	01-HS109481-3-PDA	14/OCT/2011	13/OCT/2016



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.