



CERTIFICATE NUMBER  
19-HS1890906-PDA

DATE  
29 Aug 2019

ABS TECHNICAL OFFICE  
Houston SED - Ship Systems

# CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of  
**TIDES MARINE INC.**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Seals, Shaft Seals**

Model: **Tides Marine Model HA-PB, Housing Adapter with Pneumatic Bladder**

This Product Design Assessment (PDA) Certificate 19-HS1890906-PDA, dated 29/Aug/2019 remains valid until 28/Aug/2024 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.

AMERICAN BUREAU OF SHIPPING  
*Dustin De Los Santos*

Dustin De Los Santos  
Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

**TIDES MARINE INC.**  
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Email: skip@tidesmarine.com  
Web: www.tidesmarine.com

**Tier: 3 - Type Approved, unit certification not required**

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**Product:** Seals, Shaft Seals

**Model:** Tides Marine Model HA-PB, Housing Adapter with Pneumatic Bladder

**Intended Service:**

For creating a driveshaft through-hull flange with a hose connection, which is sealed with a pneumatic bladder, for new construction and retrofits, on pleasure or commercial craft.

**Description:**

A flanged through-hull assembly which can be attached to the hull, or to an existing through-hull flange. The assembly contains a pneumatic bladder for sealing the drive shaft during maintenance and repairs. This assembly has a hose fitting designed to accept the hose associated with the SureSeal system Model FSK.

**Rating:**

For Drive Shaft Size Ranges: from 4"-8", or 100mm - 205mm.

**Service Restriction:**

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments:**

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes/Drawing/Documentation:**

Dwg No. HA-PB-5500-00, Rev. (-); Hose Adapter w/ Air Bladder - 5.50" Shaft  
Dwg No. HA-PB-5500-00A, Rev. (-); Housing 5.50" Hose Adapter Bladder  
Dwg No. HA-PB-5500-00B, Rev. (A); Housing 5.50" Flange Adapter Bladder  
Dwg No. HA-6500-05, Rev. (A); Hose Adapter 6.5" Diameter  
Dwg No. HA-6500-07, Rev. (-); Hose Adapter 6.5" Diameter  
Dwg No. HA-6500-08, Rev. (-); Hose Adapter 6.5" Diameter

**Terms of Validity:**

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## **STANDARDS**

**ABS Rules:**

Rules for Conditions of Classification, Part 1 - 2019, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:  
2019 Guide for Building and Classing Yachts: 4-3-1

Rules for Conditions of Classification, Part 1 - 2019 High-Speed Craft Rules 1-1-4/11.9, 1-1-A2, 1-1-A3, which

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covers the following:  
2019 Rules for Building and Classing High-Speed Craft: 4-3-1

**National:**  
NA

**International:**  
NA

**Government:**  
NA

**EUMED:**  
NA

**OTHERS:**  
NA