



CERTIFICATE NUMBER	24-0065488-PDA
EFFECTIVE DATE	30-Aug-2024
EXPIRY DATE	29-Aug-2029
ABS TECHNICAL OFFICE	Houston ESD - Ship Equipment

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

TIDES MARINE INC.

located at

**3251 S.W. 13TH DRIVE, , DEERFIELD BEACH, FL, United States,
33442**

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: FSK
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 29/Aug/2029 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Mohamed C Boukamcha

Mohamed C Boukamcha, 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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

TIDES MARINE INC.

3251 S.W. 13TH DRIVE

DEERFIELD BEACH FL

United States 33442

Telephone: 800-420-0949

Fax: 954-420-0945

Email: keshab@tidesmarine.com

Web: www.tidesmarine.com

Tier: 3 - Type Approved, unit certification not required

Product: Seals, Shaft Seals

Model: FSK

Endorsements:

Intended Service:

Sealing inboard Drive Shafts for new Construction or Retrofits on Pleasure or Commercial Craft.

Description:

A Drive Shaft Sealing System consisting of a WaterLubricated Housing Assembly and integral Lip Seal attached to the Vessel with Silicone Hose and Hose Clamps. Hose Adapter available to fit on an Existing Drive Shaft through-hull Flange to a Hose connection, for New Construction and Retrofits, on Pleasure or Commerical Craft.

Rating:

For drive shaft sizes from 3/4" - 8" or 20 mm - 200 mm, from 0 - 10,000 rpm, and water temperatures from 32°F - 90°F.

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:

- 1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) 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 4-4-1/9.19 of the ABS Guide for Building and Classing Yachts.
- 3) 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.
- 4) The manufacturer's recommended installation procedures are to be followed.

Notes/Drawing/Documentation:

Part No. FSA-5000-6500-1, Rev. (B); Bill of Materials for 5" x 6-1/2" Shaft Seal

Part No. FSH-5000-6500-1, Rev. (-); Strong Body Housing for 5" Shaft Seal

Terms of Validity:

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Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

TIDES MARINE INC.

3251 S.W. 13TH DRIVE

DEERFIELD BEACH FL

United States 33442

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Tier: 3 - Type Approved, unit certification not required

ABS Rules:

Rules for Conditions of Classification, Part 1 - 2024, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2024 Guide for Building and Classing Yachts: 4-3-1

Rules for Conditions of Classification, Part 1 - 2024 High-Speed Craft Rules 1-1-4/11.9, 1-1-A2, 1-1-A3, which
covers the following:
2024 Rules for Building and Classing High-Speed Craft: 4-3-1

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

Refer to the Manufacturer's Website (www.tidesmarine.com) for Standards, Ratings and Sizes



Work Order – WO0065488
Product Design Assessment (PDA)-Revalidation
Product: Seals, Shaft Seals
Model: FSK
PDA No. 24-0065488-PDA

Attention: Kesha Chantilou, Tides Marine Inc. (WCN: 999310)

The documents shown in the attached list are reviewed in accordance with the applicable requirements indicated in the PDA along with the service restrictions and comments.

We recommend that you monitor the ABS Rules, Guides and other standards used in the Assessment. These Rules, Guides and standards often change on an annual basis, and you must comply with the new Rules, Guides, and standards in order for the product to be used on an ABS classed vessel or facility contracted under the new Rules, Guides or specifications.

Additionally, we acknowledge the PDA request form warranting that the materials used in the product(s) are free from asbestos.

For any clarifications, contact Mr. Aung Khant at (AKhant@eagle.org).

Very truly yours,

Leile Froufe
Vice President of Engineering

Electronically Signed by: Mohamed Boukamcha

Documents List

Drawing No.	Rev. No.	Title	Status
PDA APPLICATION 19-HS1890908-PDA	-	PDA APPLICATION 19-HS1890908-PDA	Filed by ABS for Reference Only

Electronic copies of the documents, appropriately stamped, are available in the ABS Client Portal.