



CERTIFICATE NUMBER

DATE

01-HS109481A/3-PDA

11 January 2010

ABS TECHNICAL OFFICE

Houston SED - Ship Equipment

CERTIFICATE OF Design Assessment

This is to Certify that a representative of this Bureau did, at the request of
TIDES MARINE INC. - DEERFIELD BEACH

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. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT: Seals, Sure Seal Drive Shaft Seal

MODEL: FSK

ABS RULE: 2010 Steel Vessels Rules 1-1-4/7.7; 1975 Rules for Aluminum Vessels, Section 32; 1978 Rules for Reinforced Plastic Vessels, Section 18.4; 2000 Guide for Motor Pleasure Yachts Section 19.9 & 20.3.3f

OTHER STANDARD: 2005 ABYC Recommendations; USCG 46 CFR 58.05-1(a); Refer to the Manufacturer's Website (www.tidesmarine.com) for Standards, Ratings and Sizes;

AMERICAN BUREAU OF SHIPPING

Hans P. Haendler

Engineering Type Approval Co-ordinator

TIDES MARINE INC.
3251A S.W. 13TH DRIVE
DEERFIELD BEACH
FL 33442
United States
Telephone: 800-420-0949
Fax: 954-420-5234

MA Certificate No. 08-FL1081351

Product: Seals, Sure Seal Drive Shaft Seal

Model: FSK

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 Commercial Craft.

Ratings:

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 Restrictions:

Unit Certification is not required for this product.

Comments:

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 Motor Pleasure Yacht. 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.

Notes / Drawings / Documentation:

This Product Design Assessment (PDA) is valid only 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.

Term of Validity:

This product/model is covered under Product Design Assessment (PDA) Certificate # 01-HS109481A/3-PDA, dated 11/Jan/2010. This PDA Certificate expires 10/Jan/2015. It will remain valid for 5 years from date of issue or until the Rules or specifications used in the assessment are revised (whichever occurs first). It is valid for all vessels contracted on or before the date of the Rules used in this evaluation.

STANDARDS

ABS Rules:

2010 Steel Vessels Rules 1-1-4/7.7; 1975 Rules for Aluminum Vessels, Section 32; 1978 Rules for Reinforced Plastic Vessels, Section 18.4; 2000 Guide for Motor Pleasure Yachts Section 19.9 & 20.3.3f

National:

2005 ABYC Recommendations,

International:

NA

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Government Authority:
USCG 46 CFR 58.05-1(a)

EUMED:
NA

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