



Confirmation of Product Type Approval

Company Name: DURAMAX MARINE LLC

Address: 17990 Great Lakes Parkway OH 44234 United States

Product: Bearing, Water Lubricated Bearings

Model(s): Water Lubricated Demountable Rubber Stave Bearings

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	19-HS1853025-PDA	16-MAY-2019	15-MAY-2024
Manufacturing Assessment (MA)	16-C3217077	06-OCT-2016	25-OCT-2021
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3

Intended Service

Marine Applications - Main Propulsion Shafting: Support of Propeller and Propeller Shaft.

Description

Keystone-sided staves of molded rubber fitted in a housing to form a cylindrical bearing. A compression head split in two 180 deg segments to be bolted to the bearing housing compresses the staves producing a tight frictional bond with the housing.

Ratings

O.D. Shaft or Sleeve Journal Sizes: 2½" to 35¾";

Temperature Range: -29°C to +93°C;

Service Restrictions

Unit Certification is not required for this product.

Comments

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. 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.
3. For Bearing's dimensions, material, quality inspection, tolerances, installation procedure, bearing and journal wear see Demountable Stave Bearing Catalog.

4. The length of bearing, next to and supporting the propeller, is to be not less than four times the required tail-shaft diameter as per 4-3-2/5.15.1 of the Rules.

Notes, Drawings and Documentation

Drawing No. Declaration of Conformity_14-HS1206496-PDA, Declaration of Conformity_14-HS1206496-PDA, Revision: -, Pages: 1

Drawing No. Manufacturing Assessment Certificate 16-C3217077, MA Certificate 16-C3217077, Revision: -, Pages: 1

Drawing No. PO-10178615_V-294_20190409_112957817, Purchase Order 10178615 dated 9 April 2019, Revision: -, Pages: 1

Drawing No. TA Application_14-HS1206496-PDA, PDA Application_14-HS1206496-PDA, Revision: -, Pages: 1

Supporting Documentation (previous task):

Demountable Stave Brochure;

Dwg. No. 806815905C, Rev. -, Demountable Stave Set for 6-1/4" shaft, 1 sht.;

Dwg. No. 806827909C, Rev. -, Demountable Stave Set for 11" shaft, 1 sht.;

Dwg. No. 806840002C, Rev. -, Demountable Stave Set for 15-3/4" shaft, 1 sht.;

Term of Validity

This Product Design Assessment (PDA) Certificate 19-HS1853025-PDA, dated 16/May/2019 remains valid until 15/May/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.

ABS Rules

The Rules for Conditions of Classification, Part 1 2019, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2019 Rules for Building and Classing Marine Vessels 4-3-2/5.15.1;

2019 Rules for Building and Classing Steel Vessels 4-3-2/5.15.1;

2019 Rules for Building and Classing Steel Vessels Under 90 meters (295 feet) in Length 4-3-1/13.1;

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read "James J. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 16-Jul-2020 11:16

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 is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

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 prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. 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.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

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.

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.