



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 14-NOV-2023. 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 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: Electronic Engine Control System
Model Name(s): "Mighty Mariner"

Presented to:

KOBELT MANUFACTURING CO. LTD.
8238 129TH STREET
V3W 0A6
Canada

Intended Service:

Marine & Offshore Application - Controls the Clutch and Throttle of Single or Multiple Marine Engines either mechanically with Actuators or electronically with Output Signals. It is intended for Systems with Communication Cable runs less than 40 meters.

Description:

"Mighty Mariner" Electronic Engine Control System consists of the following components: Control heads (6501S, 6505S, 6506) Remote Control Interface Unit (6505-2000) Electronic Control Interface Unit (6503) Electronic Actuator (6527-S) Synchronizer Proximity Sensor (6500-SK)

Tier:

5

Ratings:

24VDC Power Supply Operating Temperature Range: -10 °C to +55 °C

Service Restrictions:

Unit Certification is required for this product, in case of Main Propulsion Control System. Due to communication cable length (40m max.) limitation on these electronic products, the system is not recommended, in general, for vessel greater than 30m in length or as far as the cable the cable length allows. Actuators (6527-S) & Electronic Engine Interface (6503): These units, while traditionally mounted in or around the engine room, should not be mounted where excessive heat or moisture is present. Nor should it be mounted next to high power devices such as motors, heaters, or transmitters. Automatic power supply transfer is to be verified for each specific installation.

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

Notes / Documentation: Supporting Data: * LabTest Certification Inc., Test Report No. 8426-1-EMC, Electronic Control System (Mighty Mariner), dated 1 June 2006, 46 shts; * LabTest Certification Inc., Test Report No. 8422-1, Electronic Control System (Mighty Mariner), Environmental Tests, dated 1 June 2006, 54 shts; * LabTest Certification Inc., Test Report No. 8676-1, Electronic Control System (Mighty Mariner), Dry Heat & Low Temperature Tests, dated 7 September 2006, 15 shts; * LabTest Certification Inc., Test Report No. 8618-1, Electronic Control System (Mighty Mariner), Dry Heat & Low Temperature Tests, dated 29 May 2006, 22 shts; * Brochure 5M 05/10, Kobelt Electronic Controls, Detailed Product Lines, 36 Pages; * LabTest Certification Inc., Test Report No. 8614-1, Control Heads IP Rating "IP Test" dated 28 August 2006, 14 shts; * Brochure Model 6501S, Illuminated Electronic Control Head (Mighty Mariner System), 3 shts, dated 01/06 & 10/05; * Brochure Model 6505S, Control Head (Mighty Mariner System), dated 08/06 & 07/05, 3 shts; * Brochure Model 6506, Side Mount Control, 2 shts, dated 03/2000; * Brochure Model 6505 - 2000, Remote Selector Panel, dated 01/05; * Brochure Model 6503, Electronic Control Interface Unit, dated 11/04, 2 shts; * Brochure Model 6527-S, Electronic Actuator, dated 02/12, 3 shts; * QAI Laboratories, Test Report No. E10996-1801, Electronic Control System (Mighty Mariner), Environmental Tests, Dry Heat, dated 17 September 2018, 8 shts;

Term of Validity: This Product Design Assessment (PDA) Certificate 18-HS1751300-PDA, dated 15/Nov/2018 remains valid until 14/Nov/2023 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: Rules for Conditions of Classification, Part 1 - 2018 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: 2018 Steel Vessels Under 90 Meters (295 feet) in Length Rules: 4-7-2/Table 1 & 4-7-4/Table 1

National Standards:
International Standards:
Government Authority:
EUMED:
Others: None

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	18-HS1751300-PDA	15-NOV-2018	14-NOV-2023



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.