



Confirmation of Product Type Approval

Company Name: KOBELT MANUFACTURING CO. LTD.

Address: 8238 129TH STREET SURREY V3W 0A6 Canada

Product: Steering Equipment and Control System

Model(s): 6300-0100 Controller, 6300-0200 Station, 6301-0100 Electronic Helm

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	23-2474208-PDA	26-DEC-2023	25-DEC-2028
Manufacturing Assessment (MA)	23-5867853	06-JUN-2023	05-JUN-2028
Product Quality Assurance (PQA)	NA	NA	NA

Tier

5 - Unit Certification Required

Intended Service

Steering Gear Control System for Marine & Offshore Applications.

Description

Steering systems use an electronic helm and a microprocessor, which converts electric signals to mechanical/hydraulic controlling of the rudder.

Ratings

1. 6300-0100 Controller

1) Operating Voltage: 12 - 24 Vdc

2) Operating Current @ 24 Vdc: Max 0.2A

3) Valve Operating Voltage: 12 - 32 Vdc

4) Product Weight: 0.3 kg

5) IP Rating: IP20

2. 6300-0200 Station

1) Operating Voltage: 12 - 24 Vdc

2) Operating Current @ 24 Vdc: Max 0.35A (without SBW wheel), Max 1.35A (with SBW wheel)

3) Product Weight: 0.65 kg

4) IP Rating: IP56 - Above Console, IP20 - Below Console

3. 6301-0100 Electronic Helm

1) Tactile feedback: 14.8 ft-lbs [20Nm] (max)

2) Operating speed: 120 rpm (max)

3) Output: 14 bit

4) Connection: CANbus

5) Termination: two 5 pin – M12 connectors

6) Supply voltage: 9-36 VDC

7) Power requirement: 17 W (max)

8) Compass safe distance: 0.59 in [1.5 cm]

9) Ingress protection: IP67

10) Ambient temperature: 5°F...+131°F [-15 °C... +85 °C]

11) Weight: 4.5 kg

Service Restrictions

1. Unit Certification is 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.

2. The steering control systems that are computer-based systems are to comply with Section 4-9-3 and are to be considered system category III as per 4-3-4/13.9 and 4-9-3/Table 1 in the ABS Rules for Building and Classing Marine Vessel Rules (2023).

3. The following tests are to be specifically witnessed by the attending Surveyor as per 4-9-3/Table 2, 3.5, 3.6, 3.7, and 4.1, 4.2 of the ABS Rules for Building and Classing Marine Vessels (2023):

(i) Integration Test, Fault Simulation, and Factory Acceptance Test,

(ii) On-Board Complete System Test and On-Board Integration Test.

Comments

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

2. The provision of the display & alarms as required by 4-3-4/15 Table 1 (Steering Gear Instrumentation) of the Marine Vessels Rules as applicable are to be verified for each project.

Notes, Drawings and Documentation

Drawing No. 6300-0101-ES, Electronic Schematic - Digital Controller Board, Revision: C, Pages: 49

Drawing No. 6300-0201-ES, Electronic Schematic - Digital Station Board, Revision: B, Pages: 19

Drawing No. 6300-0202-ES, Electronic Schematic - Digital Station Board, Revision: C, Pages: 20

Drawing No. 6301-0105, TFD Steering unit, Revision: D, Pages: 2

Drawing No. DATASHEET, Datasheet; Digital Steering Controller, Revision: C, Pages: 2

Drawing No. DATASHEET, Datasheet; Digital Steering Controller, Revision: B, Pages: 2

Drawing No. Master List, Revision: A, Pages: 1

Drawing No. SOP-026, Control of Programmable Electronic Systems, Revision: 2, Pages: 11

Drawing No. SPC-006, Functional Specification; Mighty Helmsman System, Revision: A, Pages: 143

Drawing No. SS0185-BD, Block diagram; Mighty Helmsman steering system, Revision: A, Pages: 2

Drawing No. Manual, Mighty Helmsman Steering System, Revision: B, Pages: 123

Test Report 30.00.21010-2, Corrosion Test and Salt Mist with performance check, Test Laboratory - LabTest Certification Inc., Date of Issue: April 18, 2022, Revision: 1, Pages: 13

Test Report 30.00.21114-1, Vibration Test, Test Laboratory - LabTest Certification Inc., Date of Issue: September 29, 2022, Revision: 0, Pages: 42

Test Report 30.00.21599-1, Damp Heat, Dry Heat, Low Temp, Power supply variation, Extreme Power supply, Insulation resistance, Test Laboratory - LabTest Certification Inc., Date of Issue: March 22, 2023, Revision: 0, Pages: 21

Test Report E10996-2105, IP Testing - IP 56 & IP 20, EMC Test Laboratory - QAI Laboratories Ltd, Date of Issue: March 14, 2022, Revision: 1, Pages: 26

Test Report E10996-2109, Immunity Testing, Compass Safe Distance, and Acoustic noise, Power Supply failure, EMC Test Laboratory - QAI Laboratories Ltd, Date of Issue: February 10, 2022, Revision: 1, Pages: 38

Test Report E10996-2303, EMC: Radiated/Conducted Emissions, Radiated/Conducted Immunity, Test Laboratory - QAI Laboratories, Date of Issue: October 20, 2023, Revision: 1, Pages: 28

Test Report RPT-001, Kobelt Steering System & Software - FAT & Sea Trials test report for Kobelt steering system dated 27 July 2022, Revision: C, Pages: 154

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 25/Dec/2028 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.

ABS Rules

2023 Rules for Conditions of Classification, Part 1 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2023 Marine Vessels Rules: 4-3-4/13.1, 4-3-4/15, 4-9-3/5, 4-9-3/9, 4-9-3/11, 4-9-9/13, 4-9-9/15, 4-9-9/Table 1 & Table 2.

2023 Rules for Conditions of Classification, Part 1 - Offshore Units and Structures: 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2023 Mobile Offshore Units Rules: 4-3-4/5.and 6-1-1/13

International Standards

N/A

EU-MED Standards

N/A

National Standards

N/A

Government Standards

N/A

Other Standards

N/A



Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 29-Aug-2024 11:14

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.