



CERTIFICATE NUMBER	19-HS1914250-PDA
EFFECTIVE DATE	16-Oct-2019
EXPIRY DATE	15-Oct-2024
ABS TECHNICAL OFFICE	Houston ESD

CERTIFICATE OF Product Design Assessment

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

KONGSBERG MARITIME AS, TRONDHEIM

located at

SKONNERTVEGEN 1, 7053 RANHEIM, TRONDHEIM, Norway, 7005

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 Wireless Temperature Monitoring System

Model Sentry GB-300

This Product Design Assessment (PDA) Certificate remains valid until 15/Oct/2024 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

Daniel Hyun SON

Hyun Young Son, 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)

KONGSBERG MARITIME AS

SKONNERTVEGEN 1

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Email: km.sales@kongsberg.com

Web: www.kongsberg.com

Tier: 2 - PDA Issued

Product: Wireless Temperature Monitoring System

Model: Sentry GB-300

Intended Service:

Temperature Monitoring in diesel engine crank pin/crosshead bearing and other rotating machinery for use on board Ship and Offshore installations.

Description:

The SENTRY GB-300 temperature monitoring system comprises wireless temperature sensors.

The wireless temperature sensors are radar based passive devices without the need of an external power source.

A low energy and high frequency radar pulse is transmitted from the SPU to a SENTRY GBW series wireless sensor, via a SENTRY GBS series Stationary Antenna.

When the sensor passes the antenna, a radar pulse is transmitted to the sensor and reflected back to the SPU. The shape and characteristics of the reflected pulse determines the temperature of the sensor.

Rating:

SIGNAL PROCESSING UNIT:

Power Supply: 24 VDC18 to 32 VDC

Number of input Channels: 10 and 16

Number of Output Channels: 16 Max

Output Range: 0-160°C

Material Housing: Aluminum

Protection ratings: IP66

WIRELESS TEMPERATURE SENSOR:

Maximum temperature sensor tip: 200 °C

Maximum temperature sensor head: 130 °C (Grivory)

Protection: IP67

Material antenna body: AISI316

Sealing Material: Epoxy

STATIONARY ANTENNA

Maximum ambient temperature: 130°C

Protection: IP67

Material antenna body: AISI316

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:

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

Notes/Drawing/Documentation:

Drawing No. 441782, SW revision GB-300, Revision: B

Drawing No. 442076, SDoC GB-300, Revision:

Drawing No. 442138, GB-300 Block Diagram, Revision: A

Drawing No. 448163, Type Approval test procedure DNV-GL signed, Revision: A

Drawing No. E-2779, Comm. Setting Labels for GBP300, Revision: C

Drawing No. E-2780, Name label GBP300, Revision: A

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Drawing No. KM-CT GB-200/GB-300 FE, User Manual KM-CT GB-200/GB-300, Revision: G

Drawing No. E18061.00, Nemko Test Report report GB-300 E18061.00, Revision 00, Date Tested: 5/03/2018-5/04/2018

Drawing No. P-GB300 CE-GB-300, GB-300 Product sheet, Revision:-

Drawing No. P-GB300 FE, User Manual GB-300, Revision: A,

Drawing No. TA Cert DNV, For information TA GB-300 from DNV-GL, Revision: -,

Drawing No. E16275.01, Nemko Test Report GB-200 E16275.01, Revision:01, Date Tested: 12/13/2016-12/22/2016

Terms of Validity:

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STANDARDS**ABS Rules:**

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

Rules for Building and Classing Marine Vessels (2019): 4-4-1/11, 4-9-2/7, 4-9-9/13

Rules for Building and Classing Steel Vessels (2019): 4-4-1/11, 4-9-2/7, 4-9-8/13

Rules for Building and Classing Steel Vessels Under 90 Meters (295 feet) in Length (2019): 4-7-2/17

Rules for Building and Classing Offshore Support Vessels (2019): 4-9-2/7, 4-9-8/13

Rules for Conditions of Classification, Part 1 - 2019 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing Mobile Offshore Units (2019): 6-1-7/5.9

Rules for Building and Classing Mobile Offshore Drilling Units (2019): 6-1-7/5.9

National:

IEC/EN 60945:2002

EN-60068-2-2: 2007

EN 60068-2-1: 2007

EN 60068-2-6: 2008

EN 60068-2-30: 2005

International:

IACS E10:2014

Government:

NA

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EUMED:

NA

OTHERS:

NA