



Marine & Offshore

Certificate number: 21922/C0 BV

File number: AP 4012

Product code: 37041

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Kongsberg Maritime AS

Ranheim - NORWAY

for the type of product

LEVEL MONITORING / ALARM SYSTEMS

GL-300 Tank Monitoring

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

EC Code: 31B/41B

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 17 Dec 2024

For Bureau Veritas Marine & Offshore,

At BV OSLO, on 17 Dec 2019,

Rune MARSTEIN

Rune Marstein



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarnb.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=q|bv6aleo3>
BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

GL-300 Tank Monitoring measures the ullage/level, inert gas pressure and temperature in tanks onboard ships. It consists of:

- GLA-300 Radar Tank Gauge (RTG)

Ex-classification: Sira 14 ATEX 2056 X
 Ex ia IIC T4
 Ui=14.3 VDC, Pi= 2.1W, Ci=347nF, Li=0
 -45°C =< Ta° =< 85°C
 IP 66/67

- GLA-310 Radar Tank Gauge (Retrofit)

Ex-classification: Sira 14 ATEX 2056 X
 Ex ia IIC T4
 Ui=14.3 VDC, Pi= 2.1W, Ci=347nF, Li=0
 -45°C =< Ta° =< 85°C
 IP 66/67

- GC-300 Cargo Temperature Unit (CTU)

Ex-classification: Sira 14 ATEX 2054 X
 Ex ia IIC T4
 Ui=28 VDC, Pi= 0.85W, Ci=9.3nF, Li=0
 -45°C =< Ta° =< 85°C

- GLK-300 Signal Processing Unit (SPU)

Ex-classification: Presafe 14 ATEX 5412 X
 [Ex ia] IIC
 Power supply: 24 VDC nom. (18 to 32 V)
 Communication: Dual Ethernet
 Input/output: 1 radar input, 1 HART input
 Ambient temperature: -15°C to 70°C

2. DOCUMENTS AND DRAWINGS:

2.1 - Data Sheets, Mechanical and Electrical Drawings of GLA-300 Radar Tank Gauge, GC-300 Cargo Temperature Unit, GLK-300 Signal Processing Unit as listed in Kongsberg document Ref: TA- documentation for certificate application of GL-300 (Issue No. B) dated 30/06/09, updated/added doc. 2014-03-17.

2.2 - GL-300 Manuals and system description as listed in Kongsberg document Ref: TA- documentation for certificate application of GL-300 (Issue No. B) dated 30/06/09.

2.3 - GL-300 Software documentation as listed in Kongsberg document Ref: TA- documentation for certificate application of GL-300 (Issue No. B) dated 30/06/09.

For modification C0 version :

- SW revision history for GL-300, new revision. J, dated 2018-10-25.

- Data Sheets of GLA-300 Radar Tank Gauge No. P-GLA300/CE Rev.E, P-GLA300H/CE Rev.E, P-GLA300HS/CE Rev.D, GC-300 Cargo Temperature Unit No. P-GC300/CZ Rev.J, GLH-320 Radar Electronic Unit No. 436580 Rev.A, GT406 Pressure transmitter No. P-GT406/CE Rev.C

3. TEST REPORTS:

- 3.1 - Nemko Report No. E09680.00 dated 2009-06-24
- 3.2 - Nemko Pressure Test – GLA-300 declaration dated 2009-06-03
- 3.3 - Nemko Salt Mist Test GLA-300 & GC-300 dated 2009-06-02
- 3.4 - Nemko Vibration No.:E10017.00 Test GLA-300/HS dated 2010-01-19

For modification C0 version :**Nemko:**

- Test Report, No. E17118.00, dated 2017-09-22.

Ex certificate:

- Certificate No. IECEx PRE 14.0053X Issue 0, dated 2014-11-27.
- Certificate No. IECEx SIR 14.0024X Issue 1, dated 2017-08-03.
- Certificate No. IECEx NEM 12.0008X Issue 2, dated 2017-03-21.
- Certificate No. IECEx SIR 14.0025X Issue 1, dated 2019-07-05.
- EU-Type Examination Certificate, Presafe 14 ATEX 5412 X, dated 2017-08-29.
- EU-Type Examination Certificate, Sira 14 ATEX 2054 X, dated 2017-08-03.
- EU-Type Examination Certificate, Sira 14 ATEX 2056 X, dated 2019-07-05.
- EU-Type Examination Certificate, Nemko 02 ATEX 119X, dated 2017-01-11.

4. APPLICATION / LIMITATION:

- 4.1 - BV Rules for the Classification of Steel Ships.
- 4.2 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31B/41B**
- 4.4 - The equipment fulfils the EMC requirements for installation on the Bridge and Deck Zones.
- 4.5 - Satisfactory performance tests should be witnessed on each installation by the Society's Surveyor after installation on board.
- 4.6 - Ex certification is not covered by this certificate, Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.
- 4.7 - GLA 300 and GLA 310 comply with the test requirements of IACS E10 Rev.7.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above products are to be supplied by **KONGSBERG MARITIME AS** in compliance with the type and the requirements described in this certificate.
- 5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
- 5.3 - BV product certificate is required.
- 5.4 - For information, **Kongsberg Maritime AS** has declared to Bureau Veritas the following production site(s):

Kongsberg Maritime AS
Skonnertvegen 1
N-7053 Ranheim
NORWAY

6. MARKING OF PRODUCT:

- 6.1 - Maker's name or trade mark
- 6.2 - Serial number of the units
- 6.3 - Equipment type number or model identification under which it was type-tested
- 6.4 - Type of protection
- 6.5 - @or \conformity marking, as relevant.

7. OTHERS:

7.1 - It is **Kongsberg Maritime AS** 's responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Certificate supersedes the Type Approval Certificate No. 21922/B0 BV issued on 14 Oct 2014 by the Society.

***** END OF CERTIFICATE *****