



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR LIQUID LEVEL GAUGE / HIGH LEVEL ALARM

Certificate No. TA20550M

This is to certify that the undernoted product(s) has/have been approved in accordance with the requirements specified in the Chapter 7, Part 6 and Chapter 4, Part 7 of “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use” and the relevant Society's Rules.

This certificate is issued to

Manufacturer: **KONGSBERG MARITIME AS**
Place of Manufacturing: **Skonnertvegen 1, NO-7005 Trondheim, Norway**
Product description: **Tank Monitoring Equipment**
Model: **GL-300**

Approval No.: **09LG003**
Valid until: **5 October 2024**

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 6 October 2019.



T. Shimada
General Manager
Machinery Department

Note: The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

Specification & documents:

1. Ratings: Power supply: DC 24 V

2. Components and reference drawings:

Components		Documents	Ex-Type
Radar Tank Gauge	GLA-300	P-GLA300/CE P-GLA300H/CE P-GLA300HS/CE GLA-300 dimensions GLA-300 Assembly GLB-300 house GLB-300 PCB top GLB-300 PCB bottom	Ex ia IIC T4
Radar Tank Gauge Electronic Unit	GLH-310 GLH-320	364982A Datasheet GLH-310 GL-2575 Assembly Drawing 436580A Datasheet GLH-320 GL-2736 Assembly Drawing	Ex ia IIC T4
Cargo Temperature Unit	GC-300	P-GC300/CE GC-225B	Ex ia IIC T4
Inert Pressure Sensor	GT406	P-GT406/CE P-GT406GLA/CE	Ex ia IIC T5
Signal Processing Unit	GLK-300	P-GLK300/CE GLK-300 dimensions GLK-Main PCB-top GLK-Main PCB-bottom GLK-Piggy PCB-top GLK-Piggy PCB-bottom	[Ex ia]IIC
Ethernet Switch	MOXA 508	Assembly Drawing HW module description	-

3. Documentation and Test Reports:

- NEMKO Test report No. E09680.00
- NEMKO Test report No. E10017.00
- NEMKO Test report No. 209536 for GCB-303 and GCB-306
- NEMKO Test report No. E17118 for GLH-320 and GT406
- IECEx_SIR_14.0025X, NEMKO 02ATEX119X
- Flame retardant material declaration

4. Software (typical example as operating system):

- Document for software verification
- SW revision history for GL-300 (Document No. 386310/J)

- To be continued -

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Attached sheet -2/2 to the Certificate No. TA20550M

Test items & approval conditions:

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS (IACS E10 Rev.7 basis)		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		X
Dry heat test (85°Cx 16 hours)		X
Damp heat test		X
Vibration test		X
Inclination test		X
Cold test		X
Salt mist test		X
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Test for intrinsically safe type		X
Flame retardant test		--

2. Approval condition:

The following tests for individual products are to be carried out at the manufacturing plant.

(1) Visual Inspection (2) Performance Test

- The End -