DNV·GL

Certificate No:
TAA00000SB

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Indicator

with type designation(s)
FLG-MS

Issued to
Hanla IMS Co., Ltd.
Busan, Republic of Korea

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**Not relevant**
Enclosure	**B**

This Certificate is valid until **2021-09-30**.

Issued at **Høvik** on **2016-10-17**

for **DNV GL**

DNV GL local station: **Busan**

Approval Engineer: **Ståle Sneen**

Odd Magne Nesvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-023258-1**
Certificate No: **TAA00000SB**

Product description
Hanla model FLG-MS magnetic float type level gauge.

Technical data

Body, Flange:	SUS304
Indicator:	SUS304, Titanium
Pressure Range:	up to 3 bar
Temperature Range:	-10°C up to 150°C
Permissible Density:	0.65 kg/m³ up to 1.5 kg/m³

Application/Limitation
The Type Approval covers hardware listed under Product description. The magnetic level gauge of type FLG-MS is type approved for use on tanks arranged above double bottom. The selection of the level gauges for the corresponding application and the right installation are to be in accordance with the instructions of the manufacturer.

The indicator is not to be used on fuel and oil tanks on passenger ships. Self-closing valves will be required for application on tanks with flammable fluids on cargo ships. Reference is given to DNV GL rules for classification of ships Pt.4 Ch.6 Sec.4 [11.6 Other level indicating devices].

Type Approval documentation

Tests carried out
Germanischer Lloyd VI-7-8: Test Requirements for Components and Systems of Mechanical Engineering and Offshore Technology, Edition 2008.

Periodical assessment
The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:
- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE