DNV·GL

Certificate No:
TAA000012E

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Indicator

with type designation(s)
PCG-150 Series

Issued to
Panasia Co., Ltd.
Busan, Republic of Korea

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

Self-Powered Content Level Gauge. When used on tanks containing flammable liquids a self-closing valve must be fitted on the tank penetration.
Location classes:

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

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**N/A**
Enclosure	**Required protection according to the Rules to be provided upon installation on board.**

Issued at **Busan** on **2017-02-10**
This Certificate is valid until **2021-12-31**.
DNV GL local station: **DNV Pusan Station**

for **DNV GL**

Approval Engineer: **Eun Sook Kim**

Baeg Soon Choi
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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Product description
Self-Powered Contents Gauge, covering:

PCG-150 S
PCG-150 F
PCG-150 V

Application/Limitation
The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring Systems.

Type Approval documentation

Tests carried out
Dry heat, Humidity, Inclination and Vibration Tests

Periodical assessment
The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE