

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Gauge Glass Level Indicator**with type designation(s)
Reflex type flat glass level gauge

Issued to

INVAL Industrial Valves Holland B.V.
Papendrecht, Netherlands

is found to comply with

Det Norske Veritas' Rules for Classification of Ships Pt.4, Ch.6 "Piping Systems"**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Temperature range:** 0-100 °C**Max. working press.:** 5 bar**Design:** Solas requirementsIssued at **Høvik** on **2017-12-21**This Certificate is valid until **2022-12-19**.for **DNV GL**DNV GL local station: **Rotterdam, Product
Certification /Verification**Approval Engineer: **Mehdi Rowshan****Marianne Spæren Marveng**
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.



Job Id: **262.1-026609-1**
Certificate No: **TAP000016B**

Product description

Reflex type marine flat glass level gauge with a self-closing valves operated by either push button, deadweight loaded or a hydraulic actuator.

Material:

Body, Flange, U-Bolt: SUS 304

Glass: Borosilicate

Body of closing valve: 11SMn30C

Application/Limitation

The level indicator is approved for use on tanks arranged above bottom top with the following limitations:

For the use on tanks containing flammable liquids, level gauge to be fitted with a self-closing valve at each end and shall be protected against mechanical damage.

The level indicator is not to be used on fuel and oil tanks on passenger ships.

For the refrigeration system, the Liquid level indicators with long glass plates shall be fitted with self closing valves in lower and upper connections.

The Level gauge is not permitted to be used in thermal oil expansion tank arrangement.

The gauges can be used in engine rooms and machinery space environment on Cargo Vessels on tanks and pressure vessels containing fluids with flashpoint above 60°C.

Stainless steel grade 304 is not seawater resistant materials, products covered by this certificate shall not be used in seawater applications.

Production Test:

Hydraulic/Leakage test to 1.5 times the maximum allowable pressure to be performed accordingly.

Type Approval documentation

Drawing no: 002-04-06/06

Drawing no: 001-05-06/012

Marking of product

For traceability to this Type Approval the products are at least to be marked with:

- Manufacturer's name or trade mark
- Type designation
- MAWP
- Nominal diameter

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.