



Certificate No:
TAP000026H

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Magnetic Liquid Level Indicator**

with type designation(s)
MLA, MLB, MLBR, MLD, MLE

Issued to
MLG Instruments
Schiedam, Zuid-Holland, Netherlands

is found to comply with
DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021
DNV rules for classification – High speed and light craft Pt.4 Ch.6 Piping systems

Application :

Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV.
Design: **Magnetic Liquid Level Indicator**

Issued at **Høvik** on **2022-05-06**

This Certificate is valid until **2027-05-05**.

DNV local station: **Netherlands CMC**

Approval Engineer: **Thomas Wilhelm Juell**

for **DNV**

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Zeinab Sharifi
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2021-03

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Product description

Magnetic float type level gauges of type MLA/-B/-BR/-D/-E with flanged or threaded connection for installation on tanks.

<i>Model</i>	<i>P/T & ASME class ratings</i>	<i>Size of chamber</i>	<i>Chamber thickness</i>	<i>Mounting</i>
MLA	PN10, PN16, PN40, #150, #300	60.3 mm	2 mm	Side mounting
MLB	PN10, PN16, PN40, #150, #300	60.3 mm	2 mm	Side mounting
	PN63, #600	60.3 mm	2.77 mm	
MLBR	PN10, PN16, PN40, PN63, #150, #300	60.3 mm/ 2" / 3"	2 mm/ 2.77 mm/ 3 mm	Side mounting
	#600	2" / 3"	2.77 mm/ 3 mm	
MLD	PN10, PN16, PN40, #150, #300	60.3 mm	2 mm	Top mounting
MLE	PN10, PN16, PN40, #150, #300, #600	3"	3 mm	Side mounting

Material:

Chamber & Flat end: 316/316L according to EN 10217-7 or A 312
 Pipe studs: AISI 304/304L (1.4301/1.4306)
 AISI 316/316L (1.4401/1.4404)
 Flanges: 316/316L EN 1092/ASME B16.5

Application/Limitation

<i>Model</i>	<i>Design temperature (°C)</i>
MLA	-45/+400
MLB	-45/+400
MLBR	-45/+400
MLD	-45/+400
MLE	-45/+400

Design pressure: As per pressure-temperature ratings of end connection flange (refer to ASME B16.5 or EN 1092).

The magnetic level gauges are approved as tank level indicator on tanks above the double bottom.

Materials and material protection chosen for the specific system shall be suitable for the intended medium and environmental conditions.

These level gauges can be installed as a means of level indication for tanks containing flammable fluids. They shall be fitted with a self-closing valve at each end, and shall be protected against mechanical damage. (Ref. DNV-RU-SHIP Pt.4 Ch.6 Sec.4 [10.6.2])

These level gauges are not permitted to be used on fuel oil tanks on passenger ships, where a penetration is required below the top of the tank. (Ref. DNV-RU-SHIP Pt.4 Ch.6 Sec.4 [10.6.4])

The design review has only covered the strength of pressurized parts. The functionality of the component has not been considered in the approval.

Type Approval documentation

Production testing

Each level gauge shall be subjected to a hydrostatic pressure test at 1.5 times the allowable pressure at room temperature.

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
- Design pressure
- Year of manufacture

Periodical assessment

For retention of the Type Approval, a DNV 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 DNV-CP-0338.