DNV·GL

Certificate No:
TAP00000W1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Magnetic Liquid Level Indicator

with type designation(s)
Visual Level Indicator (VLI)

Issued to
Weka AG
Bäretswil ZH, Switzerland

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.
Magnetic Liquid Level Indicators are type approved for application in pipe class I-III.
Design: Economy Line, Standard Line, Smart Line

Issued at **Hamburg** on **2017-04-01**
This Certificate is valid until **2022-03-31**.
DNV GL local station: **Augsburg**

Approval Engineer: **Christian Kaemmer**

for **DNV GL**

Olaf Drews
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

The magnetic level gauge allows to see the level of liquids in tanks. The level is indicated by non-contact magnetic flaps in the instrument.

Application/Limitation

The magnetic liquid level indicator is type approved for level indication of tanks containing portable and technical water, flammable liquids, lubricating oil and fuel-oil of flash point over 65°C.

The magnetic level gauge is not to be used on fuel-and oil tanks on passenger ships. For the use on tanks containing flammable liquids the magnetic level gauge is to be provided with self-closing valves or remotely operated quick closing valves at each end and is to be protected against mechanical damage.

The manufacturer has to hold a valid Approval-for-Welding-Certificate for products intended to be used in pipe class I and II.

Materials:

Body, Flange : AISI 316, 316L
Float : AISI 316L

Gaskets :

Fibre compound Aramid / NBR	up to +150°C
PTFE, non reinforced, racked	up to +250°C
Graphite incl. reinforcing net in Stainless Steel 316 / 316L	up to +400°C

For service temperatures above 50 °C the maximum allowable pressure is to be reduced acc. to the following pressure reduction factors:

Temperature	Stainless Steel
50°C:	-5%
100°C:	-15%
150°C:	-23%
200°C:	-29%
250°C:	-33%
300°C:	-37%
350°C:	-40%
400°C:	-42%

WEKA Visual Level Indicators covering the following types:

Type	Maximal working pressure & temperature:	**Design**
23614E-A /-K	Max 6 bar / -40°C up to +100°C	Economy Line 6
23614-A /-B /-K /-O	Max 6 bar / -80°C up to +150°C	Standard Line 6
34300-A /-B /-K /-O	Max 28 bar / -100°C up to +400°C	Standard Line 28
32755-A /-B /-K /-O	Max 50 bar / -80°C up to +400°C	Standard Line 50
34000E-A /-K	Max 6 bar / -40°C up to +100°C	Economy Line 6
34000-A /-B /-K /-O	Max 50 bar / -80°C up	Smart Line 50

	to +250°C	
34110-K /-O	Max 50 bar / -80°C up tp +250°C	Smart Line 50
25118		Visual Level Indicator (VLI), Two-Piece Design
Accessories		**Accessories**
25270		Top of Tank Level Indicator
25273, 33719, 33721, 33163		Heating Jacket Indicator
31130-NW /-NA / -NI / -ND / -NS		Magnetic Switch SPST
31160-NW /-NA / -NI / -ND / -NS		Magnetic Switch SPDT
33797, 22819		Measuring Scale

Type Approval documentation

Tests carried out

Visual inspection, Function test, Pressure and Tightness test, High Temperaure Test, Vibration Test, Endurance Test, Burst pressure Test, Inclination Test, Dry Heat Test, Salt Spray Test, Low Temperature Test, Humidity Test.

Marking of product

For traceability to this type approval, each level indicator is to be marked with:

- manufacturer's name or trade mark
- Type designation

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, 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, components and/or materials used comply with type approved documents and/or referenced system, component and material specifications
- Review of possible changes in design of systems, 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