



Marine & Offshore
Division

Certificate number: 21434/B0 BV

File number: ACM141/2511/01

Product code: 3714I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

HADRO TECHNIEK B.V.
MOORDRECHT - NETHERLANDS

for the type of product

LEVEL GAUGES / INDICATORS

Magnetic Level Gauges series Pointer D, Pointer L, Pointer F and Pointer R

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 08 Sep 2019

For BUREAU VERITAS,

At BV GRONINGEN, on 08 Sep 2014,

John Mondt



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 May 2009

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Magnetic Level Gauges series Pointer D, Pointer L, Pointer F and Pointer R

1.1 Design

Pointer D: With two process connections for mounting on the side of a vessel. This design is suitable for many different applications, for example condensate tanks, etc.

Pointer L: With one process connection for mounting on the side of a vessel. This model is often used for day tanks for ships.

Pointer F (mounting on top of a vessel): With one process connection on the bottom, this type is suitable for mounting above a tank. This design is mostly used for storage tank below the surface.

Pointer R (mounting between two pipes): With two process connections at the end of the level gauge, this type is suitable for mounting between two pipe lines.

1.2 Technical Data depending on type

Type	Pointer D and L	Pointer F	Pointer R
Series	D- ** and L- **	F-01 / F-02 / F-03 / F-04	R-40 / R-150 / R-300
Working Pressure (bar)	up to 100	Max. 40	Max. 40
Working Temperature (°C)	Max. 400	Max. 160	Max. 400
Float	From density min. 380 kg/m ³	From density: - min. 780 kg/m ³ (F-01 / F-02) - min. 470 kg/m ³ (F-03 / F-04)	From density min. 380 kg/m ³
Pipe (mm)	60.3 x 2 / 60.3 x 2,77, 3, 3,2	60.3 x 2	60.3 x 2
End connections	Welded, threaded or flanged	Flanged	Threaded or flanged

1.3 Material specification

Measuring tube *	Stainless steel 316L (1.4404)
Indication rail	Polycarbonate / aluminium / Perspex / stainless steel
Flanges, stop	Stainless steel 316L (1.4404)
Gasket	NBR, EPDM, FPM, PTFE, graphite

* or equivalent material. BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Drawings N° 1303-01 (Pointer D-10), N° 1303-02 (Pointer D-16) and N° 1303-03 (Pointer D-40)
- Instruction manuals

3. TEST REPORTS

- 3.1 Test report N° 12 0419 2 98 of MPA NRW, Dortmund, Germany (model type tested Pointer D-10).
- 3.2 Tests carried out: visual inspection, vibration test, hydraulic pressure test

4. APPLICATION / LIMITATION

- 4.1 May be used as tank level indicator for fresh water, fuel oil, lubricating oil and other media which have a flash point above 60 °C according to requirements Pt C, Ch 1, Sec 10 [2.9.2] of BUREAU VERITAS Rules.
- 4.2 Switches (for marine applications or for hazardous areas) are not part of this approval.
- 4.3 The tank level indicators are not admitted for oil fuel and other flammable oils on board passenger ships having to comply with SOLAS Convention, as amended unless otherwise permitted on a case by case ship basis.
- 4.4 Approval valid for ships intended to be granted with the following additional class notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.
- 4.5 The fitting of the devices is to be in accordance with the manufacturer's instructions as well as the Rules and Regulations applicable to the ship.
- 4.6 The devices are to be installed and tested to the Surveyor's satisfaction.
- 4.7 Each device is to be supplied with its manual for installation, use and maintenance.

5. PRODUCTION SURVEY REQUIREMENTS

5.1 The products are to be supplied by **HADRO TECHNIEK B.V.** in compliance with the type and the requirements described in this certificate.

5.2 This type of product is within the category IBV of BUREAU VERITAS Rule Note NR320.

5.3 BV product certificate is required.

Place of production

HADRO TECHNIEK B.V.
WESTBAAN 270
2841 MC MOORDRECHT
NETHERLANDS

6. MARKING OF PRODUCT

The product shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Operational data
- Society's brand as relevant

7. OTHERS

This approval is given on the understanding that the manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper method of fitting and general maintenance of the products and of the conditions of this approval.

This certificate supersedes the Type Approval Certificate No. 21434/A0 BV issued on 18/03/2009 by the Society.

***** END OF CERTIFICATE *****