



CERTIFICATE NUMBER
14-gd1236501-PDA

DATE
05 Dec 2014

ABS TECHNICAL OFFICE
Gdynia Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of
ENDRESS & HAUSER GMBH & CO.

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: **Hydrostatic pressure sensor (waterpilot)**

Model: **FMX 167**

This Product Design Assessment (PDA) Certificate 14-gd1236501-PDA, dated 05/Dec/2014 remains valid until 09/Dec/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Arkadiusz Pytkowski
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

ENDRESS & HAUSER GMBH & CO.

HAUPTSTR. 1

MAULBURG

Germany D-79689

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Web: www.pcm.endress.com



Tier: 2 - PDA Issued

Product: Hydrostatic pressure sensor (waterpilot)

Model: FMX 167

Intended Service:

Hydrostatic water pressure/ level measurement.

Description:

Sensor housing made of material 1.4435, also with protection by heat shrinkable plastic tubing (suitable for 250°C).
Sensor membrane made of aluminium oxid ceramic.
Sensor suspension rope, screened and insulated with Polyethylene (PE) or Polyurethane (PUR) or Tetrafluorethylene-Hexafluorpropylene (FEP).

Rating:

Pressure range: 0.1 bar to 20 bar.

Process temperature range: -10°C to 70°C for level measurement in deep wells and wastewater, 0°C to 50°C for level measurement in saltwater.

Ambient temperature range: -10°C to 70°C for level measurement in deep wells and wastewater, 0°C to 50°C for level measurement in saltwater.

Power supply: 10 to 30 V DC.

Output: 4...20 mA, 2-wire.

Degree of protection: IP 68.

Certified II 2 G EEx ia IIC T6 (TUEV 01 ATEX 1685).

Service Restriction:

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. The sensing devices are to be arranged such that they may be isolated and removed without emptying tanks or without impairing the integrity of pressurized systems.
3. ATEX certified equipment is not to be installed in hazardous areas on U.S. vessels unless it can be proven to have been tested to the applicable IEC 60079 series standards by an independent laboratory accepted by the U.S. Coast Guard. USCG notice 01-12 (February 7, 2012).

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. Each particular application and installation is to be specifically approved in conjunction with the relevant system, locations and environmental conditions.

Notes/Drawing/Documentation:

1. Technical information T100351PEN_Waterpilot FMX167
2. Operating instructions BA00231PEN_Waterpilot FMX167

This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

Terms of Validity:

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This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence

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HAUPTSTR. 1

MAULBURG

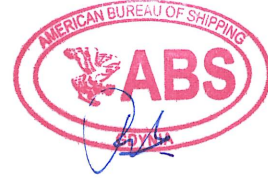
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STANDARDS

ABS Rules:

ABS Steel Vessels Rules (2014) 1-1-4/7.7, 1-1-A3 & A4, 4-6-2/9.11.2/3, 4-6-4/13.5.6(b)/, 4-8-3/1.7/ 1.11/ 1.17, 4-9-8/13,

Offshore Support Vessels (2014) 1-1-4/7.7, 1-1-A3 & A4, 4-6-2/9.11.2/3, 4-8-3/1.7/ 1.11/ 1.17, 4-9-8/13,

Steel Vessels Under 90 Meters (295 Feet) in Length (2014) 1-1-A3 & A4, 4-4-1/9.17.3, 4-6-4/11/15/17, 4-7-4/3.9,

Mobile Offshore Drilling Units (2014) 1-1-4/9.7, 1-1-A2 & A3, 4-1-1/7.7, 4-3-3/Table 1,

Facilities on Offshore Installations (2014) 1-1-4/9.7, 1-1-A2 & 3,

Steel Barge Rules (2014) 1-1-A3 & 4, 4-1-3/1.

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA