



CERTIFICATE NUMBER
16-HG1476831-PDA-DUP

DATE
28 Jan 2016

ABS TECHNICAL OFFICE
Hamburg Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to certify that a representative of this Bureau did, at the request of
KFG LEVEL AG

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: **Level Indicator, By Pass Type**

Model: **BNA..., BMG..., ACS...**

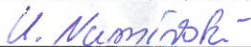
This Product Design Assessment (PDA) Certificate 16-HG1476831-PDA-DUP, dated 28/Jan/2016 remains valid until 21/Jan/2021 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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



Ulf Numirski
Engineer/Consultant

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).

KFG LEVEL AG

RUESSENSTR. 4

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Tier: 2 - PDA Issued

Product: Level Indicator, By Pass Type**Model:** BNA..., BMG..., ACS...**Intended Service:**

Liquid level gauging.

Description:

Float operated liquid level indicator consisting of a bypass tube (40 to 88.9 mm diam.) made of stainless steel or titanium with a cylinder type float made of stainless steel 1.4404, 1.4435, 1.4571 or titanium. Direct magnetic roller display, made of plastic (MRA) or ceramics (MRK).

Optional additional magnetic switch or sensor for analog output signals.

Certified safe type BNA, BMG, ACS - Ex, II 1/2G c IIC T*, II 2D c IIC T*, II 1/2G c IIB T*, II 2D c IIB T*, II 2G c IIC T*, II 2D c IIC T*, II 2G c IIB T*, II 2D c IIB T* (SEV 11 ATEX 0191); (T*=classified by medium).

(For more details please see attachment)

Rating:

Max. Working Pressure: 400 bar.

Max. Working Temperature: 400 deg C.

Degree of Protection: IP65.

Service Restriction:

Unit Certification is not required for this product. If the manufacturer or purchaser's request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

- If the tank level indicators are installed at tank locations where they are subject to a static head of liquid they are to be fitted with valves or arranged to be such that they may be removed without emptying the tank.

- For passenger vessels the level indicators are not to be installed on oil tanks where they require tank wall penetration below tank top.

- 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.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Each particular installation is to be approved in conjunction with the relevant system, tank arrangement and hazardous zone.

Notes/Drawing/Documentation:

Drawing No. 1015 Zchn1002_010, Dimension Drawing, Revision: -, Pages: 1

Drawing No. 1015 Zchn1002_011, Dimension Drawing, Revision: -, Pages: 1

Drawing No. 1015 Zchn1002_012, Dimension Drawing, Revision: -, Pages: 1

Drawing No. 1015 Zchn1002_013, Dimension Drawing, Revision: -, Pages: 1

Drawing No. 1015 Zchn1002_014, Dimension Drawing, Revision: -, Pages: 1

Drawing No. 1015 ZchnDOK_6042, Dimension Drawing, Revision: -, Pages: 1

Drawing No. 1015 ZchnDOK_6043, Dimension Drawing, Revision: -, Pages: 1

Drawing No. 1015-mini_150, Catalog, Mini 150, Revision: -, Pages: 1

Drawing No. 1015_150, Catalog, Revision: -, Pages: 1

Drawing No. 110030, Dimension Drawing, Revision: -, Pages: 1

Drawing No. SEV 11 ATEX 0191, ATEX Certificate, Revision: -, Pages: 1

Terms of Validity:

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Tier: 2 - PDA Issued

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STANDARDS

ABS Rules:

2016 Steel Vessel Rules, 1-1-4/7.7, 1-1-Appendix 3 and 4, 4-6-2/ 9.11.3, 4-6-4/ 13.5.6(b)/ 15.3.4(b), 4-8-3/ 1.7/ 1.11.1/ 1.17/ 13, 4-9-8/ 7/ 13

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA