



CERTIFICATE NUMBER

DATE

14-LD480295C-PDA

18 September 2014

ABS TECHNICAL OFFICE

London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of
DANFOSS A/S - NORDBORG

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: **Pressure Transmitter**

MODEL: **MBS 33M; MBS 4210; MBS 4251; MBS 4701 and MBS 4751**


This Product Design Assessment (PDA) Certificate 14-LD480295C-PDA, dated 18/Sep/2014 remains valid until 17/Sep/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


Malcolm C Barraclough

Engineer

AB258(01/10)

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 manufacturing process 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 Rule 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

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 application/certificate is governed by the "Terms and Conditions of the Request for Product Type Approval and Agreement" as contained in the ABS Rules.

AB258(0713)

DANFOSS A/S

NORDBORGVEJ 81
 NORDBORG
 DK-6430
 Denmark
 Telephone: 45-7488-2222
 Fax: 45-74 88 40 00
 Email: flemming_boss@danfoss.com
 Web: www.danfoss.com



MA Certificate No. 09-EG 1751249 **Tier:** 3

Product: Pressure Transmitter

Model: MBS 33M; MBS 4210; MBS 4251; MBS 4701 and MBS 4751

Intended Service:

ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules

Description:

Intrinsically safe pressure transmitter for hazardous environments
 Control alarm and monitoring function in marine and industrial applications

Ratings:

Pressure Range: 0-600 bar; Power Supply: 10-30 V D.C.; Output Signal: 4-20 mA; Plug Version: IP 65; Cable Version: IP 67; Operation Temperature: -40 degrees C to 85 degrees C

Service Restrictions:

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.

Comments:

Not Applicable

Notes / Drawings / Documentation:

This Product Design Assessment (PDA) is valid oDAnly 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.

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

Test reports: T1204616 performed by DELTA

Term of Validity:

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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.

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STANDARDS**ABS Rules:**

The Rules applicable to this assessment are:

- Steel Vessel Rules (2014) 1-1-4/7.7, 4-8-3/1.7, 4-8-3/1.11 and 4-8-3/1.13
- Steel Vessels Under 90 Meters (295 Feet) in Length (2014) 1-14/7.7, 1-1-A 3 and 4
- Facilities on Offshore Installations (2014) 1-1-4/9.7, 1-1-A 2 and 3
- Offshore Support Vessels (2014) 1-1-4/7.7, 1-1-A 3 and 4; 4-8-3/1.13
- Mobile Offshore Drilling Units Rules (2014) 1-1-4/9.7, 1-1-A 2 and 3
- Aluminum Vessels (1975) 1-1-4/7.7, 1-1-A 3 and 4
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2014) 1-1-4/7.7, 1-1-A 3 and 4

DANFOSS A/S

NORDBORGVEJ 81

NORDBORG

DK-6430

Denmark

Telephone: 45-7488-2222

Fax: 45-74 88 40 00

Email: flemming_boss@danfoss.com

Web: www.danfoss.com



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Tier: 3

- Bulk Carriers for Service on the Great Lakes (1978) 1-1-4/./., 1-1-A 3 and 4

National:

EN 61000-6-2; EN61000-6-3

International:

IEC 60068-2-6; IEC 60068-2-64; IEC 60068 - 2 - 27; IEC 60068 - 2 - 32; IEC 60068-2-30; IEC 60068-2-2; IEC 60068-2-1; IEC 60529; IEC 60068-2-1; IEC 60068-2-52, IEC 61000-4-3:2006

Government Authority:

NA

EUMED:

NA

Others:

NA