



CERTIFICATE NUMBER 19-LD1825861-PDA

EFFECTIVE DATE 14-Feb-2019

EXPIRATION DATE 13-Feb-2024

ABS TECHNICAL OFFICE London Engineering Department

## CERTIFICATE OF

# Product Design Assessment

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

**ONTOP B.V.**

located at

**Middelburg, Netherlands**

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 Exhaust Gas Piping System**

**Model Metaloterm AD / AM**

This Product Design Assessment (PDA) Certificate remains valid until 25 February 2024 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Mohammed Abbas, 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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

**ONTOP B.V.**

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Web: www.metaloterm.com

**Tier: 3 - Type Approved, unit certification not required**

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**Product:** Exhaust Gas Piping System  
**Model:** Metaloterm AD / AM  
**Intended Service:**  
Exhaust gas piping system for internal combustion engines.

**Description:**

Twin wall, insulated, modular, stainless steel exhaust gas piping system for internal combustion engines. This is a lightweight exhaust system made of three components. Outer wall and inner walls are made of stainless steel and the cavity is pre-insulated with impregnated mineral wool.

**Material specifications:**

AD: Inner wall - Stainless steel AISI 316L, Outer wall - Stainless steel AISI 304  
AM: Inner wall - Stainless steel AISI 316L, Outer wall - Stainless Steel 254 SMO (EN 1.4547)

**Minimum wall Thickness: ( Inner Wall/ Outer Wall)**

AD 130-300 mm dia: 0.5 mm / 0.5 mm,  
AM 130-300 mm dia: 0.5 mm / 0.6 mm  
AD 350-400 mm dia : 0.6 mm/ 0.5 mm ; AD 450-600 mm dia : 0.6 mm/ 0.6 mm  
AM 350-600 mm dia: 0.6 mm/ 0.6 mm  
AD 700-1000 mm dia: 0.8 mm/ 0.8 mm  
AM 700-1000 mm dia: 0.8 mm/ 0.6 mm  
Insulation - Rock wool, minimum thickness 37.5mm.  
Refer manufacturer's brochure for more details.

**Rating:**

Size range: 130 - 1000 mmm  
Maximum working pressure: 5000 Pa  
Maximum working temperature: 600 deg C

**Service Restriction:**

1. Piping penetrations are to be approved as per the applicable ABS Rules.
2. Exhaust pipes of different engines not to be interconnected unless specifically approved.
3. Unit Certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments:**

1. Exhaust gas piping systems are to be installed in accordance with manufacturer's recommendations and 4-6-5/11.9 of the ABS Marine Vessel Rules and 4-6-5/11.7 of ABS Steel Vessel Rules.
2. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes/Drawing/Documentation:**

Dwg. No. / Dwg. Title / Approved Date  
DP110833 rev.D / AD Main Production Data / 29 Jan 2014  
CP110841 rev.C / AD Main Production Data / 29 Jan 2014  
AP111639 rev.A / GROTE DIAMETERS Main Production Data / 29 Jan 2014

**Terms of Validity:**

This Product Design Assessment (PDA) Certificate 19-LD1825861-PDA, dated 14/Feb/2019 remains valid until 13/Feb/2024 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

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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.

**STANDARDS**

**ABS Rules:**

2019 ABS Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-5/11

2019 ABS Steel Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-5/11

2019 ABS Mobile Offshore Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-6/13.1

**National:**

NA

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA