



## *Confirmation of Product Type Approval*

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 13-FEB-2024. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid 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.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

**Product Name:** Exhaust Gas Piping System  
**Model Name(s):** Metaloterm AD / AM

**Presented to:**  
ONTOP B.V.  
OUDE VEERSEWEG 23  
4332 SH  
Netherlands

**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 - Staineless 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.

**Tier:** 3

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

**Service Restrictions:** 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 / 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

**Term 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 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.

**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 Standards:**  
**International Standards:**  
**Government Authority:**  
**EUMED:**  
**Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	19-LD1825861-PDA	18-FEB-2019	13-FEB-2024



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.