



Marine &amp; Offshore

Certificate number: 19609/C0 BV

File number: ACM 135/2653/01

Product code: 2190H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**ONTOP BV**

MIDDELBURG - NETHERLANDS

*for the type of product*

### MISCELLANEOUS PIPINGS FOR SPECIAL APPLICATIONS

Exhaust Gas Systems - Metaloterm AD / AM

#### Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

*This certificate is a renewal of certificate N° 19609/B0 BV expiring on 25/01/2018*

**This certificate will expire on: 25 Jan 2023**

**For Bureau Veritas Marine & Offshore,**

At BV GRONINGEN, on 04 Jan 2018,

John Mondt



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site [www.veristar.com](http://www.veristar.com). Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION

#### **Exhaust Gas Systems - Metaloterm AD / AM**

- Twin wall insulated modular, stainless steel, exhaust gas piping system for internal combustion engines

##### 1.1 Technical details

Nominal Dimensions (mm)	130	150	180	200	250	300	350	400	450	500	600	700	800
Outer Diameter (mm)	205	225	255	275	325	375	425	475	525	575	675	800	900
Inner wall min. thickness (mm)	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,6	0,6	0,6	0,6	0,8
Outer wall min. thickness (mm)	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,6	0,6	0,6	0,6	0,8
Insulation min. thickness (mm)	37,5												
Max. working pressure (Pa)	5000												
Max. working temperature (°C)	600												

##### 1.2 Material specification

Parts	Metaloterm AD	Metaloterm AM
Inner wall	AISI 316L (EN 1.4404)	AISI 316L (EN 1.4404)
Outer wall	AISI 304 (EN 1.4301)	254 SMO (EN 1.4547)
Insulation	Mineral wool (Rockwool)	Mineral wool (Rockwool)

*When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.*

### 2. DOCUMENTS AND DRAWINGS

- Metaloterm AD - Product range & system description - issue 2011-10
- Metaloterm AM - issue 2011-03
- Metaloterm - Exhaust systems for the shipbuilding industry - issue 2009-09
- Metaloterm AD - Mounting instructions - issue 2012-03
- Drawings N° DP110833 (AD 130-300) and N° DP110841 (AD 350-600) updated 15/01/2013
- Drawing N° AP111639 (Dia. 700-1000) dated 01/08/2011

*No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.*

### 3. TEST REPORTS

Not applicable.

### 4. APPLICATION / LIMITATION

- 4.1 The modular exhaust gas system for internal combustion engines can be used on board BV-classed ships and offshore units.
- 4.2 The installation on board is to be carried out in compliance with manufacturer's installation instructions and in accordance with the requirements given in Pt C, Ch 1 Sec 1, Sec 2 and Sec 10 of Bureau Veritas Rules.
- 4.3 The insulation materials are to type approved by the Society.

### 5. PRODUCTION SURVEY REQUIREMENTS

5.1 Metaloterm products are to be supplied by **ONTOP B.V.** in compliance with the type described in this certificate and in compliance with the requirements stated on the front page of this certificate.

This type of product is within the category HBV of Bureau Veritas Rule Note NR 320.

5.2 ONTOP B.V. has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR 320 for HBV products.

For information, **ONTOP B.V.** has declared to Bureau Veritas the following production site:

**ONTOP B.V.: OUDE VEERSEWEG 23, MIDDELBURG, NETHERLANDS**

## **6. MARKING OF PRODUCT**

Metaloterm products shall be marked with at least:

- Manufacturer's name or logo
- Nominal diameter
- Technical ratings acc. to manufacturer's chimney plate

## **7. OTHERS**

It is **ONTOP B.V.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*This certificate supersedes the Type Approval Certificate N° 19609/B0 BV issued by the Society.*

**\*\*\* END OF CERTIFICATE \*\*\***