



Marine & Offshore

Certificate number: 19609/D0 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

SCHIEDEL METALOTERM B.V.

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 will expire on: 13 Apr 2028

For Bureau Veritas Marine & Offshore,

At BV GRONINGEN, on 13 Apr 2023,

Olaf RUITER

This certificate was created electronically and is valid without signature



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. 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 electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=opw7mski0z>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

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

Type	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM	AD / AM
Nominal Dimensions (mm)	130	150	180	200	250	300	350	400	450	500	600	700	800	900	1000
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	0,6	0,6	0,6
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	0,6	0,6	0,6
Insulation min. thickness (mm)	37,5														
Max. working pressure (Pa)	5000														
Max. working temperature (°C)	600														

1.2 Material specifications

Parts	Metaloterm AD	Metaloterm AM
Inner wall	ASTM 316L (1.4404)	ASTM 316L (1.4404)
Outer wall	ASTM 304 (1.4301) ASTM 316L (1.4401) ASTM 254 SMO (1.4547) ASTM 904L (1.4539)	ASTM 254 SMO (1.4547) ASTM 904L (1.4539)
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

- Drawing N° MM016125-050000-000 Rev. E dated 18/01/2023
- Drawing N° MPD AM 130-300 Rev. E
- Drawing N° MPD AM 350-400 Rev. D
- Drawing N° MPD AM 450-600 Rev. D
- Drawing N° MDP AM 700-1000 Rev. E
- Drawing N° MPD AD 130-300 Rev. G
- Drawing N° MPD AD 350-400 Rev. E
- Drawing N° MPD AD 450-600 Rev. E
- Material data sheet dated 05/04/2023
- Metaloterm AD - Mounting instructions - Rev. R
- Metaloterm AM - Mounting instructions - Rev. M

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 - The products are to be supplied by **Schiedel Metaloterm B.V.** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV

product certificate.

5.3 - **Schiedel Metaloterm B.V.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

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

Schiedel Metaloterm B.V.
Oude Veerseweg 23
4332 SH Middelburg
NETHERLANDS

6. MARKING OF PRODUCT

Metaloterm products shall be marked with at least:

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

7. OTHERS

It is **Schiedel Metaloterm 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/C0 BV issued by the Society.

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