



**Work Order - WO0133852
Product Design Assessment (PDA)
Exhaust Gas Piping System
PDA No. 25-0133852-PDA**

Attention: Mr. Sander Veldhorst, SCHIEDEL B.V (WCN: 421465)

The documents shown in the attached list are reviewed in accordance with the applicable requirements indicated in the PDA along with the service restrictions and comments.

We recommend that you monitor the ABS Rules, Guides and other standards used in the Assessment. These Rules, Guides and standards often change on an annual basis, and you must comply with the new Rules, Guides and standards in order for the product to be used on an ABS classed vessel or facility contracted under the new Rules, Guides or specifications.

For any clarifications, contact Mr. Mohammed Abbas at +44 (0) 207377 4453 or (mabbas@eagle.org).

Very truly yours,

Pier Carazzai
Vice President of Engineering

Electronically Signed by: Mohammed Abbas

Documents List

Drawing No.	Rev. No.	Title	Status
-	-	ad-mounting-instruction	Filed by ABS for Reference Only
-	-	am-mounting-instruction	Filed by ABS for Reference Only
-		online application - PDA revalidation - 19-LD1825861-PDA	Filed by ABS for Reference Only
MM016125-050000-000	E	MPD AD 700-1000	Approved
19-01020-000000-000	D	MPD AM 450-600	Approved
19-00978-050000-000	E	MPD AD 450-600	Approved
19-01002-000000-000	D	MPD AM 350-400	Approved
19-00900-050000-000	E	MPD AD 350-400	Approved
MM017291-050000-000	E	MPD AM 700-1000	Approved
19-00765-000000-000	E	MPD AM 080-300	Approved
16-3136-000000-000	G	MPD AD 080-300	Approved

Electronic copies of the documents, appropriately stamped, are available in the ABS MyFreedom™ Client Portal.



CERTIFICATE NUMBER	25-0133852-PDA
EFFECTIVE DATE	03-Feb-2025
EXPIRY DATE	02-Feb-2030
ABS TECHNICAL OFFICE	Busan Engineering Services

CERTIFICATE OF Product Design Assessment

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

SCHIEDEL B.V

located at

OUDE VEERSEWEG 23, , MIDDELBURG, Netherlands, 4332 SH

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.

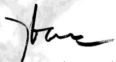
Product: Exhaust Gas Piping System
Model: AD / AM
Endorsements:
Tier: 3 - Type Approved, unit certification not required

This Product Design Assessment (PDA) Certificate remains valid until 02/Feb/2030 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


Seong-Ju Kang, 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)

SCHIEDEL B.V

OUDE VEERSEWEG 23

MIDDELBURG

Netherlands 4332 SH

Telephone: +31 118689936

Fax: +31 118 689 999

Email: sander.veldhorst@schiedel.com

Web: www.schiedel.com

Tier: 3 - Type Approved, unit certification not required

Product: Exhaust Gas Piping System**Model:** AD / AM**Endorsements:****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 mm

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 Marine 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

MM016125-050000-000 Rev.E / MPD AD 700-1000

19-01020-000000-000 Rev.D / MPD AM 450-600

19-00978-050000-000 Rev.E / MPD AD 450-600

19-01002-000000-000 Rev.D / MPD AM 350-400

19-00900-050000-000 Rev.E / MPD AD 350-400

MM017291-050000-000 Rev.E / MPD AM 700-1000

19-00765-000000-000 Rev. E / MPD AM 080-300

16-3136-000000-000 Rev.G / MPD AD 080-300

SCHIEDEL B.V

OUDE VEERSEWEG 23

MIDDELBURG

Netherlands 4332 SH

Telephone: +31 118689936

Fax: +31 118 689 999

Email: sander.veldhorst@schiedel.com

Web: www.schiedel.com

Tier: 3 - Type Approved, unit certification not required

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 02/Feb/2030 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.

STANDARDS

ABS Rules:

2025 Rules for Conditions of Classification 1A-1-4/7.7, 1A-1-A3, 1A-1-A4

2025 ABS Marine Vessel Rules 4-6-5/11

2025 Rules for Conditions of Classification 1B-1-9.7, 1B-1-A2, 1B-1-A3

2025 ABS Mobile Offshore Units Rules 4-2-6/13.1

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA