

TYPE APPROVAL CERTIFICATE

Certificate No:
TAP00001B2
Revision No:
1

This is to certify:

That the Pipe System with Couplings

with type designation(s)
Exhaust gas piping system, type DW-Power (DW-PW)

Issued to
Jeremias Abgastechnik GmbH
Wassertrüdingen, Germany

is found to comply with
EN 1856-1:2009 Chimneys – Requirements for metal chimneys – Part 1: System chimney products
EN 1856-2:2009 Chimneys – Requirements for metal chimneys – Part 2: Metal flue liners and connecting flue pipes
EN 13216-1:2004 Chimneys – Test methods for system chimneys – Part 1: General test methods

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Temperature range: up to 600 °C
Max. pressure: 5000 Pa
Design: see certificate

Issued at **Hamburg** on **2023-06-01**

This Certificate is valid until **2028-05-31** .

DNV local unit: **Augsburg**

for **DNV**

Approval Engineer: **Ana Cristina Do Carmo Insfran**

Sven Klinger
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Exhaust gas piping system DW-Power consisting of double walled pipes.

Technical data:

<u>Materials</u>	Inner pipe	ASTM SA 312 TP 304H, 316L, 316 Ti / EN 1.4948, 1.4404, 1.4571
	Outer pipe	ASTM SA 312 TP 304, 316L, 316 Ti / EN 1.4301, 1.4404, 1.4571
	Insulation	Type approved pre-formed mineral fibre, Minimum density 120kg/m ³ , Minimum thickness 57,5 mm
	Sealing materials	Asplit (up to 600 °C) DN 100 to DN 500 0,5 mm to 1,0 mm inside /outside up to 600°C
Size range		
Pipe wall thickness		
Maximum Allowable Working Temp. (MAWT)		
Maximum Allowable Working Pressure (MAWP)		5000 Pa

Application/Limitation

The exhaust gas piping systems type DW-PW is approved for the use as exhaust gas lines on boilers and diesel engines (downstream to turbo chargers)

Note:

For penetration of ship's fire divisions DNV type approved pipe penetrations shall be used.

The selection of the Exhaust Gas System for the corresponding application and correct installation shall be in accordance with the manufacturer's instructions.

Type approval documentation

Tests carried out

- Wind load test
- Gas tightness test
- Mechanical strength and stability test
- Test and evaluation of a system chimney according EN 1856-1, consisting of the following tests:
 - Mechanical strength
 - Thermal performance at heat stress conditions
 - Gas tightness
 - Corrosion resistance
 - Thermal resistance



Job Id: **262.1-024245-2**
Certificate No: **TAP00001B2**
Revision No: **1**

Place of Production

Jeremias Abgastechnik GmbH
Opfenrieder Straße 11 – 14
D-91717 Wassertrüdingen

Marking of product

For traceability to this type approval the products are to be marked with:

- Manufacturer's name and mark
- Nominal diameter
- DNV - Type Application Certificate number

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNV CP-0338, Sec.4.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

END OF CERTIFICATE