

# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAP00001CN**  
Revision No:  
**1**

## This is to certify:

**That the Pipe System with Couplings**

with type designation(s)  
**Exhaust gas piping system DW-fu / double wall**

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:** up to 20 MPa  
**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**

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**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-fu consisting of double walled pipe.

### Technical data:

<u>Materials</u>		
	Inner pipe	ASTM SA 312 TP 304H, 316L, 316TI, / EN 1.4404, 1.4571, 1.4948
	Outer pipe	ASTM SA 312 TP 304, 316L, 316TI / EN 1.4404, 1.4571
	Insulation	Type approved pre-formed mineral fibre, Minimum thickness 32,5 mm / optional 50 mm Minimum density 120 kg/m <sup>3</sup>
Size range		DN 80 to DN 1000
Pipe wall thickness		0,6 mm to 1,0 mm inside / outside
Maximum Allowable Working Temp. (MAWT)		up to 600°C
Maximum Allowable Working Pressure (MAWP)		up to 20 Pa

## Application/Limitation

The exhaust gas piping system of type DW-fu is approved for the use as exhaust gas line on gas, oil and solid fuel fired boilers for low pressure operation.

### 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 Examination documentation

### 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