

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM000008X
Revision No:
3

This is to certify:

That

Heinz Gothe GmbH & Co. KG
Druckerstraße 12-20, 41238 Mönchengladbach,
Germany

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with

DNV rules for classification – Ships
DNV class programme – DNV-CP-0252 Steel pipes and steel pipe fittings

and the following particulars:

Product	Pipes and fittings
Application area	Austenitic and ferritic-austenitic steel pipes, Piping fittings
Steel type	Austenitic stainless, Ferritic-austenitic (Duplex) stainless, Nickel-base alloys
Manufacturing method	See page 2
Max. outer diameter	Longitudinal fusion welding
Max. wall thickness	See page 2
Heat treatment condition	See page 2

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules. Materials to be applied to DNV classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2024-10-29**

This Certificate is valid until **2027-10-31**.

DNV local unit: **Essen**

Approval Engineer: **Christian Wildhagen**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature

Martin Wenning

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.

Particulars of the approval

Pipes

Steel type	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition ²⁾
Austenitic stainless ³⁾	EFW	2 000	50	SHT or AW
22Cr-duplex ³⁾	EFW	2 000	50	SHT or AW
Ni-base alloy ⁵⁾	EFW	2 000	40	SHT or AW

Piping fittings

Steel type	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition ²⁾
Austenitic stainless ⁴⁾	EFW	2 000	50	SHT or AW
22Cr-duplex ⁴⁾	EFW	2 000	50	SHT or AW
Ni-base alloy ⁵⁾	EFW	2 000	40	SHT or AW

Remarks:

- 1) EFW: electric fusion welded
- 2) SHT: solution heat treated (solution annealing)
AW: as welded
- 3) Austenitic and ferritic-austenitic steel pipes acc. recognised standards, e.g. ISO 9330 Part 6, EN 10217 Part 7, ASTM A269, ASTM A358, ASTM A790, ASTM A928 or JIS G3459
- 4) Piping fitting acc. recognised standards, e.g. EN 10253, ASTM A403, ASTM A774, ASTM A815, ASTM A960, ASTM A961, JIS B2312, JIS B2313 or JIS B2316.
- 5) Nickel-base alloys acc. recognised standards, e.g. ASTM B619, DIN 17751

Special conditions:

- Heat treatment is subcontracted to Wilhelm Schulz GmbH, Krefeld