



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM000029U
Revision No:
3

This is to certify:

That

Butting Könnern GmbH
Könnern, Sachsen-Anhalt, Germany

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with

DNV rules for classification – Ships
DNV-OS-B101 – Metallic materials
DNV class programme – DNV-CP-0252 Steel pipes and steel pipe fittings

and the following particulars:

| | |
|---------------------------------------|---|
| Product | Pipes |
| Application area | Austenitic and ferritic-austenitic steel pipes |
| Steel type | Austenitic stainless, Ferritic-austenitic (Duplex) stainless |
| Manufacturing method | Electric fusion welded |
| Max. outer diameter | See page 2 |
| Max. wall thickness | See page 2 |
| Heat treatment condition | See page 2 |
| Additional approval conditions | 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 **2025-03-05**

This Certificate is valid until **2027-06-30**.

DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Andreas Koch**



for **DNV**

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

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

Austenitic and Ferritic-austenitic steel pipes

| Steel type /grade ³⁾ | Manufacturing method ¹⁾ | Max. outer diameter [mm] | Max. wall thickness [mm] | Heat treatment condition ²⁾ |
|---------------------------------|------------------------------------|--------------------------|--------------------------|--|
| Austenitic stainless | EFW | 2000 | 24 | SHT |
| 22Cr duplex stainless | EFW | 2000 | 24 | SHT |
| 25Cr duplex stainless | EFW | 2000 | 24 | SHT |

Remarks:

- 1) EFW: Electric fusion welded
- 2) SHT: Solution Heat Treated (solution annealing)
- 3) Suitable pipe grades shall be selected from the following recognised standards:
ISO 9329 Part 4, ISO 9330 Part 6, EN 10216 Part 5, EN 10217 Part 7,
ASTM A269, ASTM A312, ASTM A358, ASTM A789, ASTM A790, ASTM A928 and
JIS G3459

Additional approval conditions:

Including automatic eddy current and x-ray testing in lieu of hydraulic testing according to relevant standard