

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

IBF SPA

**Via Gandhi 17/19, 20010 Vittuone MI,
Italy**

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with
**DNV GL rules for classification – Ships
DNVGL-OS-B101 – Metallic materials**

and the following particulars:

Product	Fittings (elbows, tees, reducers, caps)
Application area	Piping fittings
Steel type	Ferritic-austenitic (Duplex) stainless
Manufacturing method	Hot formed/cold formed/welded
Max. outer diameter	See page 2
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 GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2021-02-18**

for **DNV GL**

This Certificate is valid until **2024-02-17**.

DNV GL local station: **Milan**

Approval Engineer: **Stefan Röhr**

Thorsten Lohmann
Head of Section

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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

Pipe fittings (elbows, tees, reducers, caps)

Steel type /grade ³⁾	Manufacturing method ^{1) 4) 5)}	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition ²⁾
22 Cr duplex	HFS, CFS, EFS	610	30	SHT
25 Cr duplex	HFS, CFS, EFS	610	30	SHT

Remarks:

- 1) HFS: Hot finished seamless (starting material: welded pipes/seamless pipes)
CFS: Cold finished seamless (starting material: welded pipes/seamless pipes)
EFS: Electric fusion welded GTAW, SMAW, SAW (starting material hot formed plates)
- 2) SHT: Solution heat treated (solution annealing)
- 3) Suitable pipe fittings shall be selected from the following recognized standards:
EN 10253, ASTM A234, ASTM A403, ASTM A420, ASTM A774, ASTM A815, ASTM A960,
ASTM A961, JIS B2312, JIS B2313 or JIS B2316
- 4) Caps manufactured from plates
- 5) The starting materials for fabrication of fittings (covered by this section) shall consist of plates, seamless pipes or welded pipes and shall be sourced from works approved by the Society for fittings to be delivered with VL or works (W) certificate