



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00002Y6

This is to certify:

That

TECNINOX S.r.l.
Via Don Spagnoli, 7
29010 Sarmato, PC, Italy

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with
DNV rules for classification – Ships

and the following particulars:

Product	Fittings
Application area	Piping fittings
Steel type	Austenitic stainless, Ferritic-austenitic (Duplex) stainless
Manufacturing method	Cold formed
Max. outer diameter	See page 2
Max. wall thickness	See page 2
Heat treatment condition	Solution heat treated
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 **2022-02-07**

for **DNV**

This Certificate is valid until **2025-02-06**.

DNV local station: **Italy/Malta CMC**

Approval Engineer: **Torben Schällicke**

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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 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

Piping fittings (Elbows, Reducers and Tees)

Steel type	Grade	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition ²⁾
Austenitic	CrNi	CFS	323.9	12.7	SHT
	CrNiMo	CFS	323.9	12.7	SHT
Ferritic-austenitic stainless (Duplex)	22Cr	CFS	323.9	18.3	SHT
	25Cr	CFS	323.9	18.3	SHT

Remarks:

- 1) CFS: cold finished seamless (starting material: seamless pipes)
- 2) SHT: Solution Heat Treated (solution annealing)
- 3) Piping fitting
 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.