

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00002H4
Revision No:
1

This is to certify:

That

M.E.G.A. S.p.A.

**Via Dalla Chiesa 3, 24020 Scanzorosciate BG,
Italy**

is an approved manufacturer of
Steel Forgings

in accordance with

DNV rules for classification – Ships

and the following particulars:

Application area	Forgings for boilers, pressure vessels and piping systems
Product	Nickel-base alloy forgings
Steel type/alloy	Forged fittings Carbon, carbon-manganese, Alloy, Austenitic stainless, Austenitic-ferritic (duplex) stainless, Nickel base alloy
Forging method	Closed die forging
Max. weight	100 kg
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 **2022-04-05**

for **DNV**

This Certificate is valid until **2025-04-14**.

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

Approval Engineer: **Andreas Koch**

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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

Forgings for boilers, pressure vessels and piping systems

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
C and C-Mn	NV F450H, NV F490H	CD	100	N, NT, QT
Alloy	NV F0.5Mo, NV F1Cr0.5Mo	CD	100	NT, QT
	NV F2.25Cr1Mo	CD	100	N, QT

Stainless steel forgings

Steel type / grade ⁴⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
Austenitic stainless	CD	100	SHT
22 Cr Duplex stainless, 25 Cr Duplex stainless	CD	100	SHT

Nickel alloy forgings

Alloy type / grade ⁵⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
ASTM B564-18 (UNS N08825)	CD	100	acc. to standard

Remarks:

- 1) CD: Closed die forgings
- 2) QT: Quenched and tempered; N: Normalized; NT: Normalized and tempered
SHT: Solution Heat Treated (Solution Annealing)
- 3) Incl. equivalent grades in acc. to other standards
- 4) Stainless steel forgings shall be in accordance with recognized standards, e.g. EN 10222, ASTM A473/A965/A1049 and JIS G 3214, provided that supplementary requirements contained herein are also met. Recognition of other standards is subject to submission to the Society for evaluation.
- 5) Possible application and certification of any material to classed object is subject to case by case approval based on DNVGL approved drawings