

**APPROVAL OF MANUFACTURER
CERTIFICATE**

Certificate No:
AMMM000009F
Revision No:
1

This is to certify:

That

F.A.I.L. SRL

Via Galileo Galilei, 18 - 42020 San Polo d'Enza, RE, Italy

is an approved manufacturer of
Steel Castings

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

and the following particulars:

Application area	Castings for machinery, Castings for boilers, pressure vessels and piping systems, Stainless steel castings
Steel type	Carbon and carbon-manganese, Austenitic stainless, Martensitic stainless
Casting method	Sand casting
Max. weight	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 **2021-01-13**

This Certificate is valid until **2024-01-06**.
DNV GL local station: **Milan**

Approval Engineer: **Stefan Röhr**



for **DNV GL**

Digitally Signed By: Wildhagen, Christian
Location: DNV GL Hamburg, Germany
Signing Date: 14.01.2021, on behalf of

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.



Job Id: **263.11-004620-2**
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Particulars of the approval

Castings for machinery

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	VL C400U, VL C440U, VL C480U, VL C520U, VL C560U, VL C600U	SC	600	100	N, NT, QT

Castings for boilers, pressure vessels and piping systems

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	VL C450H, VL C490H	SC	600	100	N, NT, QT

Stainless steel castings

Steel type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition ²⁾
Austenitic	GX 2 CrNi 18 10 (304L) GX 5 CrNi 19 9 (304) GX 6 CrNiNb 19 10 (347) GX 2 CrNiMo 19 11 2 (316L) GX 5 CrNiMo 19 11 2 (316) GX 5 CrNiMo 19 11 3 (317)	SC	600	100	SHT
Martensitic		SC	600	100	QT

Remarks:

- 1) SC: Sand Castings
- 2) SHT: Solution Heat Treated (Solution Annealing); N: Normalized
QT: Quenched and tempered; NT: Normalized and tempered
- 3) Incl. equivalent grades in acc. to other standards