



# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00000SG**  
Revision No:  
**3**

This is to certify:

That

**F.Ili Gandossi Acciaierie Elettriche s.p.a.**  
Via Roma 23, 24027 Nembro BG ,  
Italy

is an approved manufacturer of  
**Steel Castings**

in accordance with

**DNV rules for classification – Ships**  
**DNV class programme – DNV-CP-0246 Steel castings**

and the following particulars:

<b>Application area</b>	<b>Castings for hull structures and equipment</b> <b>Casting for machinery</b> <b>Castings for boilers, pressure vessels and piping systems</b> <b>Stainless steel castings</b>
<b>Steel type</b>	<b>Carbon, Carbon-Manganese,</b> <b>Austenitic Stainless</b>
<b>Casting method</b>	<b>See page 2</b>
<b>Max. weight</b>	<b>8 500kg Carbon, Carbon-Manganese</b> <b>4 500kg Austenitic Stainless</b>
<b>Max. wall thickness</b>	<b>See page 2</b>
<b>Heat treatment condition</b>	<b>See page 2</b>
<b>Additional approval conditions</b>	<b>See page 2</b>

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 **2024-07-10**

This Certificate is valid until **2027-07-31**.

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

Approval Engineer: **Stefan Röhr**



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.



Form code: AM 311

Revision: 2022-12

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## Particulars of the approval

### Castings for hull structure and equipment

Steel type	Grade <sup>3) 4)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	NV C400UW, NV C440UW, NV C480UW, NV C520UW, NV C560UW, NV C600UW	SC	8 500	600	N, NT, QT

### Castings for machinery

Steel type	Grade <sup>3) 4)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	NV C400U, NV C440U, NV C480U, NV C520U, NV C560U, NV C600U	SC	8 500	600	N, NT, QT

### Castings for boilers, pressure vessels and piping systems

Steel type	Grade <sup>3) 4)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	NV C450H, NV C490H	SC	8 500	600	N, NT, QT

### Stainless steel castings

Steel type	Grade <sup>3) 4)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
Austenitic Stainless	GX 2 CrNi 18 10 (304L) GX 5 CrNi 19 9 (304) GX 2 CrNiMo 19 11 2 (316L) GX 5 CrNiMo 19 11 2 (316)	SC	4 500	400	SHT

#### Remarks:

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

#### Additional approval conditions:

Including austenitic stainless steel for low temperature service