



# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00000EB**  
Revision No:  
**2**

This is to certify:

That

**FONDERIE PENA**  
**24 Chemin de la Poudrière,**  
**33700 Mérignac,**  
**France**

is an approved manufacturer of  
**Steel Castings**

in accordance with  
**DNV rules for classification – Ships**

and the following particulars:

<b>Application area</b>	<b>Castings for hull structures and equipment</b> <b>Castings for machinery</b> <b>Stainless steel castings</b>
<b>Steel type</b>	<b>Carbon and carbon-manganese,</b> <b>Austenitic stainless,</b> <b>See page 2</b>
<b>Casting method</b>	<b>Sand casting</b>
<b>Max. weight</b>	<b>600 kg</b>
<b>Max. wall thickness</b>	<b>80 mm</b>
<b>Heat treatment condition</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 **2022-12-22**

This Certificate is valid until **2025-12-31**.

DNV local unit: **France NB**

Approval Engineer: **Christian Wildhagen**



for **DNV**

Digitally Signed By: Roehr, Stefan

Location: DNV Hamburg, Germany

Signing Date: 22.12.2022 , 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 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)</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	600	80	N, NT, QT

### Castings for machinery

Steel type	Grade <sup>3)</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	600	80	N, NT, QT

### Stainless steel castings

Steel type	Grade <sup>3)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
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	80	SHT

#### Remarks:

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