

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00002CR**  
Revision No:  
**3**

This is to certify:

That

**FAED Grupo Empresarial, S.L.**  
Polígono Industrial Requejada, parcela Z26,  
39313 Polanco (Cantabria),  
Spain

is an approved manufacturer of  
**Steel Castings**

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

and the following particulars:

<b>Application area</b>	<b>Castings for hull structures and equipment, Castings for machinery, Stainless steel castings, Castings for propellers</b>
<b>Steel type</b>	<b>Carbon and carbon-manganese, Martensitic stainless, Austenitic stainless, Ferritic-martensitic stainless</b>
<b>Casting method</b>	<b>Sand casting</b>
<b>Max. weight</b>	<b>See page 2</b>
<b>Max. wall thickness</b>	<b>628 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 **2021-12-07**

for **DNV**

This Certificate is valid until **2024-12-17**.

DNV local station: **Area NB/CMC Iberia**

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

### 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	VL C400UW, VL C440UW, VL C480UW, VL C520UW, VL C560UW, VL C600UW	SC	5588	628	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	VL C400U, VL C440U, VL C480U, VL C520U, VL C560U, VL C600U	SC	5588	628	N, NT, QT

### Stainless steel castings incl. propeller and propeller parts

Steel type	Grade	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
Austenitic	VL C19Cr11Ni <sup>3)</sup>	SC	3 000	628	SHT
	GX2CrNi19-11 acc. EN 10283 <sup>3)</sup>				
Martensitic		SC	6 205	628	QT
Ferritic-Martensitic		SC	6 205	628	QT

#### Remarks:

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