



# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00000CF**  
Revision No:  
**3**

This is to certify:

That

**Carolinenhütte GmbH**  
Carolinenhütte 1, 93183 Kallmünz,  
Germany

is an approved manufacturer of  
**Iron Castings**

in accordance with

**DNV rules for classification – Ships**  
**DNV class programme – DNV-CP-0249 Iron castings**

and the following particulars:

<b>Iron type</b>	<b>Grey Cast Iron</b> <b>Nodular Cast Iron</b>
<b>Casting method</b>	<b>Sand casting</b>
<b>Max. weight</b>	<b>10000 kg</b>
<b>Max. wall thickness</b>	<b>See page 2</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 **2025-05-22**

This Certificate is valid until **2027-12-31**.

DNV local unit: **Augsburg**

Approval Engineer: **Christian Wildhagen**



for **DNV**

This document has been digitally signed and will  
therefore not have handwritten signature

Martin Wenning

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

### Cast Iron

Iron type	Grade	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
Grey	EN-GJL-200 acc. EN 1561	SC	10 000	250	AC
	EN-GJL-250 acc. EN 1561	SC	10 000	250	AC
	EN-GJL-300 acc. EN 1561	SC	10 000	250	AC
Nodular	NV NCI400	SC	10 000	250	AC
	NV NCI500-7	SC	10 000	250	AC
	NV NCI600-3	SC	10 000	250	AC
	NV NCI700	SC	10 000	250	AC
	NV NCI800	SC	10 000	250	AC
	EN-GJS-400-18 acc. EN 1563	SC	10 000	250	AC
	EN-GJS-400-15 acc. EN 1563	SC	10 000	250	AC
	EN-GJS-500-7 acc. EN 1563	SC	10 000	250	AC
	EN-GJS-600-3 acc. EN 1563	SC	10 000	250	AC
	EN-GJS-700-2 acc. EN 1563	SC	10 000	250	AC
	EN-GJS-800-2 acc. EN 1563	SC	10 000	250	AC

Remarks:

- 1) SC: Sand casting
- 2) AC: As cast