



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00002VE

This is to certify:

That

Giesserei Heunisch GmbH
Westheimer Str. 6,
91438 Bad Windsheim,
Germany

is an approved manufacturer of
Iron Castings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Iron type	Grey cast iron, Nodular cast iron
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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2021-04-20**

for **DNV**

This Certificate is valid until **2024-04-20**.

DNV local station: **Augsburg**

Approval Engineer: **Christian Wildhagen**

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.



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Particulars of the approval

Cast iron

Iron type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition ²⁾
Grey	200	SC	700	60	AC
	250	SC	700	60	AC
	300	SC	700	60	AC
Nodular	VL NCI-2	SC	700	60	AC
	VL NCI 400	SC	700	60	AC
	VL NCI 500	SC	700	60	AC
	VL NCI 600	SC	700	60	AC
	VL NCI 700	SC	700	60	AC
	VL NCI 800	SC	700	60	AC
	EN-GJS-400-18-LT acc. EN 1563	SC	700	60	AC
	EN-GJS-400-18-RT acc. EN 1563	SC	700	60	AC
	EN-GJS-400-18 acc. EN 1563	SC	700	60	AC
	EN-GJS-400-15 acc. EN 1563	SC	700	60	AC
	EN-GJS-450-10 acc. EN 1563	SC	700	60	AC
	EN-GJS-500-7 acc. EN 1563	SC	700	60	AC
	EN-GJS-600-3 acc. EN 1563	SC	700	60	AC
	EN-GJS-700-2 acc. EN 1563	SC	700	60	AC
EN-GJS-450-18 acc. EN 1563 ⁴⁾	SC	700	60	AC	
EN-GJS-SiMo40-10 acc. EN 16124 ⁴⁾	SC	700	60	AC	

Remarks:

- 1) SC: Sand casting
- 2) AC: As cast
- 3) Incl. equivalent grades in acc. to other standards
- 4) Possible application and certification of any material to classed object is subject to case by case approval