

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00000HG
Revision No:
1

This is to certify:

That

Mandal Castings AS
Støperiveien 13, 4517 Mandal,
Norway

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 GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2020-06-25**

This Certificate is valid until **2022-06-01**.

DNV GL local station: **Kristiansand S**

Approval Engineer: **Christian Wildhagen**



for **DNV GL**

Digitally Signed By: Roehr, Stefan

Location: DNV GL Hamburg, Germany

Signing Date: 29.06.2020 , 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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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: 2020-01

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Job Id: **263.11-010868-1**
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Particulars of the approval

Cast iron

Iron type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
Grey	200	SC	6 500	AC
	250	SC	6 500	AC
	300	SC	6 500	AC
	350	SC	6 500	AC
Nodular	VL NCI-1	SC	6 500	AC
	VL NCI-2	SC	6 500	AC
	VL NCI 370	SC	6 500	AC
	VL NCI 400	SC	6 500	AC
	VL NCI 500	SC	6 500	AC
	VL NCI 600	SC	6 500	AC
	VL NCI 700	SC	6 500	AC
	VL NCI 800	SC	6 500	AC

Remarks:

- 1) SC: Sand casting
- 2) AC: As cast
- 3) Incl. equivalent grades in acc. to other standards