

# APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

**Vanguard Foundry Ltd**  
**Stourbridge, West Midlands,**  
**United Kingdom**

is an approved manufacturer of  
**Iron Castings**

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

and the following particulars:

<b>Iron type</b>	<b>Nodular cast iron</b>
<b>Casting method</b>	<b>Sand casting</b>
<b>Max. weight</b>	<b>200 kg</b>
<b>Max. wall thickness</b>	<b>40 mm</b>
<b>Heat treatment condition</b>	<b>As cast</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 GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2019-09-04**

for **DNV GL**

This Certificate is valid until **2022-06-30**.

DNV GL local station: **Manchester**

Approval Engineer: **Christian Wildhagen**

**Thorsten Lohmann**  
**Head of Section**



Job Id: **263.11-002035-4**  
Certificate No: **AMMM00002KG**

## Particulars of the approval

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### Cast iron

Iron type	Grade <sup>3)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
Nodular	VL NCI 400	SC	200	40	AC
	VL NCI 500	SC	200	40	AC

Remarks:

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