

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00002A1**  
Revision No:  
**1**

## This is to certify:

That

**Benninger Guss AG**  
**CH-9240 Uzwil, Switzerland**

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>Grey cast iron, Nodular cast iron</b>
<b>Casting method</b>	<b>Sand casting, Investment casting</b>
<b>Max. weight</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 GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2018-10-15**

for **DNV GL**

This Certificate is valid until **2021-10-03**.

DNV GL local station: **Augsburg**

Approval Engineer: **Enno Brück**

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



Job Id: **263.11-008102-1**  
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## Particulars of the approval

### Cast iron

Iron type	Grade <sup>3) 4)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
Grey	200	SC, IC	5 000	AC
	250	SC, IC	5 000	AC
	300	SC, IC	5 000	AC
Nodular	VL NCI 370	SC, IC	5 000	AC
	VL NCI 400	SC, IC	5 000	AC
	VL NCI 500	SC, IC	5 000	AC
	VL NCI 600	SC, IC	5 000	AC
	VL NCI 700	SC, IC	5 000	AC
	VL NCI 800	SC, IC	5 000	AC
	EN-GJS-900-2 acc. EN 1563 <sup>5)</sup>	SC, IC	5 000	AC
	EN-GJS-XSiMo 4.1 <sup>5)</sup>	SC, IC	5 000	AC

#### Remarks:

- 1) SC: Sand casting  
IC: Investment casting
- 2) AC: As cast
- 3) Certification of any material applied to classed object shall fulfil the applicable material requirements in the DNV GL class rules
- 4) Incl. equivalent grades in acc. to other standards
- 5) Possible application and certification of any material to classed object is subject to case by case approval