

# APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

**Eisengießerei Torgelow GmbH**  
**Torgelow, Germany**

is an approved manufacturer of  
**Iron Castings**

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

and the following particulars:

<b>Iron type(s)</b>	<b>Grey cast iron</b> <b>Nodular cast iron</b>
<b>Max. weight</b>	<b>100000 kg</b>
<b>Remarks</b>	<b>see Particulars of the approval</b>

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules.

This Certificate is valid until **2019-02-28**.

Issued at **Hamburg** on **2016-03-30**

DNV GL local station: **Rostock**

Approval Engineer: **Christian Wildhagen**

for **DNV GL**

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

Job Id: **263.11-005730-1**  
 Certificate No: **AMMM00000G6**

## Particulars of the approval

### Cast Iron

Grade	Product	Supply Condition	Casting Method	Thickness [mm], max.	Weight [kg], max.
EN-GJL-200 acc. to EN 1561	GG	AC	SC	200	9800
EN-GJL-250 acc. to EN 1561	GG	AC	SC	200	9800
EN-GJL-300 acc. to EN 1561	GG	AC	SC	200	9800
EN-GJL-350 acc. to EN 1561	GG	AC	SC	200	9800
GGL 320 NiCr 4.2 and GGL Z 300 VCuTi 3.2 acc. to customer spec.	GG	AC	SC	200	9800
EN-GJS-350-22 acc. to EN 1563	GGG	AC	SC	200	100000
EN-GJS-350-22-LT acc. to EN 1563	GGG	F	SC	200	100000
EN-GJS-350-22-RT acc. to EN 1563	GGG	F	SC	200	100000
EN-GJS-400-15 acc. to EN 1563	GGG	AC	SC	200	100000
EN-GJS-400-18 acc. to EN 1563	GGG	AC	SC	200	100000
EN-GJS-400-18-LT acc. to EN 1563	GGG	F	SC	200	100000
EN-GJS-400-18-RT acc. to EN 1563	GGG	F	SC	200	100000
EN-GJS-450-10 acc. to EN 1563	GGG	AC	SC	200	100000
EN-GJS-500-7 acc. to EN 1563	GGG	AC	SC	200	100000
EN-GJS-600-3 acc. to EN 1563	GGG	AC	SC	200	100000
EN-GJS-700-2 acc. to EN 1563	GGG	AC	SC	200	100000
EN-GJS-800-2 acc. to EN 1563	GGG	AC	SC	200	100000
VL NCI-1	GGG	AC	SC	200	100000
VL NCI-2	GGG	AC	SC	200	100000
VL NCI370	GGG	AC	SC	200	100000
VL NCI400	GGG	AC	SC	200	100000
VL NCI500	GGG	AC	SC	200	100000
VL NCI600	GGG	AC	SC	200	100000
VL NCI700	GGG	AC	SC	200	100000
VL NCI800	GGG	AC	SC	200	100000

GG: grey cast iron

GGG: nodular cast iron

AC: as cast

F: ferritized

SC: sand casting