

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

**ACTech GmbH
Halsbrücker Straße 51
09599 Freiberg, Germany**is an approved manufacturer of
Iron Castingsin accordance with
**DNV GL rules for classification – Ships
DNV GL offshore standards**

and the following particulars:

Iron type	Grey cast iron, Nodular cast iron, see page 2
Casting method	Sand casting
Max. weight	See page 2
Max. wall thickness	See page 2
Heat treatment condition	As cast

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 **2018-04-17**for **DNV GL**This Certificate is valid until **2021-04-16**.DNV GL local station: **Essen**Approval Engineer: **Christian Wildhagen**

**Thorsten Lohmann
Head of Section**

Particulars of the approval

Cast iron

Iron type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Heat treatment condition ²⁾
Grey	200	SC	300	50	AC
	250				
	300				
Nodular	VL NCI-2				
	VL NCI 400				
	VL NCI 500				
	VL NCI 600				
	VL NCI 700				
	VL NCI 800				
	EN-GJS-400-18LT acc. EN 1563				
	EN-GJS-400-18RT acc. EN 1563				
	EN-GJS-400-18 acc. EN 1563				
	EN-GJS-500-7 acc. EN 1563				
	EN-GJS-600-3 acc. EN 1563				
	EN-GJS-700-2 acc. EN 1563				
	EN-GJS-800-2 acc. EN 1563				
	EN-GJS-SiMo40-10				
EN-GJS-SiMo40-6					
EN-GJS-SiMo45-10					
EN-GJS-SiMo45-6					
EN-GJS-SiMo50-10					

Remarks:

- 1) SC: Sand casting
- 2) AC: As cast
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules