

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

Stahlwerk Augustfehn Schmiede GmbH & Co. KG
Apen Niedersachsen, Germany

is an approved manufacturer of
Steel Forgings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Casting for machinery
Steel type(s)	Carbon and carbon-manganese Alloy
Max. weight	See page 2
Delivery 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 **2017-11-30**

for **DNV GL**

This Certificate is valid until **2020-11-29**.

DNV GL local station: **Leer**

Approval Engineer: **Andreas Koch**

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Thorsten Lohmann
Head of Section



Particulars of the approval

Forgings for Shafting and Machinery

Steel type	Grade	Forging method ¹⁾	Max. weight [kg]	Max. diameter / section [mm]	Delivery condition ²⁾
C and C-Mn	VL C400U, VL C440U, VL C480U, VL C520U, VL C560U, VL C600U, VL F640U, VL F680U, VL F720U, VL F760U	OD, CD	6 000	900	N
	C – steels acc. to EN 10083-2 ³⁾				
	C – steels acc. to EN 10250-2 ³⁾				

Forgings

Steel type	Grade	Forging method ¹⁾	Max. weight [kg]	Max. diameter / section [mm]	Delivery condition ²⁾
Alloy	CrMo acc. to EN 10083-1 ³⁾ acc. to EN 10250-3 ³⁾	OD, CD	6 000	900	QT
	CrMoV acc. to EN 10083-1 ³⁾ acc. to EN 10250-3 ³⁾				
	CrNiMo acc. to EN 10083-1 ³⁾ acc. to EN 10250-3 ³⁾				

Remarks:

- 1) SC: Sand Casting
 OD: Open die forging
 CD: Closed die forging
- 2) N: Normalised
 QT: Quenched and tempered
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules