

# APPROVAL OF MANUFACTURER CERTIFICATE

**This is to certify:**

**That**

**Kollmeder Schmiede - u. Presswerk GmbH & Co. KG**  
**Zettelstraße 1, 84030 Ergolding Bayern, Germany**

is an approved manufacturer of  
**Steel Forgings**

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

and the following particulars:

<b>Application area</b>	<b>Forgings for hull structures and equipment</b> <b>Forgings for shafting and machinery</b> <b>Forgings for boilers, pressure vessels and piping systems</b>
<b>Steel type</b>	<b>Carbon and carbon-manganese Alloy</b>
<b>Forging method</b>	<b>Open die forging, ring rolling</b> <b>see page 2</b>
<b>Max. weight</b>	<b>See page 2</b>
<b>Heat treatment condition</b>	<b>Normalized, quenched and tempered, See page 2</b>
<b>Additional approval conditions</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 **2018-04-19**

for **DNV GL**

This Certificate is valid until **2021-06-30**.

DNV GL local station: **Augsburg**

Approval Engineer: **Enno Brück**

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



**Particulars of the approval**  
**Forgings for hull structures and equipment**  
**Forgings for shafting and machinery**  
**Forgings for boilers, pressure vessels and piping systems**

Steel type	Grade <sup>3),4)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / section [mm]	Delivery condition <sup>2)</sup>	Max thickness [mm]
C and C-Mn	StE 460 acc. to DIN 17103	OD, RR	14 000	7000	N, QT	300
	StE 355 acc. to DIN 17103	OD, RR	14 000	7000	N, QT	300
	P 460NH acc. to EN 10028-3 (WStE 460 acc. to DIN 17103)	OD, RR	14 000	7000	N, QT	300
	P 355NH acc. to EN 10028-3 (WStE 355 acc. to DIN 17103)	OD, RR	14 000	7000	N, QT	300
	P 460 NL 1 acc. to EN 10028-3 (TStE 460 acc. to DIN 17103)	OD, RR	14 000	7000	N, QT	300
	P 355 NL 1 acc. to EN 10028-3 (TStE 355 acc. to DIN 17103)	OD, RR	14 000	7000	N, QT	300
	S355J2G3 acc to EN 10250-2	OD, RR	14 000	7000	N	300
	P355NH acc. to EN 10222-4	OD, RR	14 000	7000	N	300
	P355QH1 acc. to EN 10222-4	OD, RR	14 000	7000	QT	300
	S460NL acc to EN 10025-3	OD, RR	14 000	7000	N	300
	S355NL acc. to EN 10025-3	OD, RR	14 000	7000	N	300
	Alloy	42CrMo4 acc. to LN 180-7	OD, RR	14 000	4500	QT
34CrMo4 acc. to EN 10083-3		OD, RR	14 000	4500	QT	320
25CrMo acc. to EN 10083-3		OD, RR	14 000	4500	QT	320
42CrMo4 acc. to EN10083-3		OD, RR	14 000	4500	QT	320

Remarks:

- 1) OD: Open die forging  
RR: Rolling rolling
- 2) QT: Quenched and tempered  
N: Normalised
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Incl. equivalent grades in acc. to other standards