

# APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

**SSK von Schaewen Wetter GmbH**  
**Wetter (Ruhr) Nordrhein-Westfalen, Germany**

is an approved manufacturer of  
**Steel Forgings**

in accordance with

**DNV GL rules for classification – Ships**  
**GL Rules for Classification and Construction II - Materials and Welding Part 1 - Metallic**  
**Materials**

and the following particulars:

<b>Products</b>	<b>Open die forgings</b>
<b>Steel type(s)</b>	<b>Carbon and carbon-manganese</b> <b>Alloy</b> <b>Stainless</b>
<b>Max. weight</b>	<b>38 000 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 **2019-06-30**.

Issued at **Hamburg** on **2016-05-03**

DNV GL local station: **Essen**

Approval Engineer: **Christian Wildhagen**

for **DNV GL**

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

Job Id: **263.11-000720-3**  
 Certificate No: **AMMM00000J9**

## Particulars of the approval

### Forgings:

Grade	Product	Supply Condition	Thickness [mm], max.	Weight [kg], max.	Length [m], max.
<b>Forgings for hull structures and equipment</b>					
F400UW, F440UW, F480UW, F520UW, F560UW, F600UW	FF	N, N+T, Q+T	750	38000	14
F550AW, F600AW, F650AW	FF	Q+T	750	38000	14
<b>Forgings for shafting and machinery</b>					
F400U, F440U, F480U, F520U, F560U, F600U, F640U, F680U, F720U, F760U	FF	N, N+T, Q+T	750	38000	14
F600A, F700A, F800A, F900A, F1000, F1100A	FF	Q+T	750	38000	14
<b>Non-alloy steels</b>					
C & C-Mn steels acc. to EN 10083-2	FF	acc. Standard	750	38000	14
C & C-Mn steels acc. to EN 10250-2	FF	acc. Standard	750	38000	14
<b>Alloy steels</b>					
Alloy steels acc. to EN 10083-3	FF	acc. Standard	750	38000	14
Alloy steels acc. to EN 10250-3	FF	acc. Standard	750	38000	14
<b>Stainless steels</b>					
1.4462 acc. to EN 10250-4	FF	S+Q	750	38000	14
1.4462 acc. to EN 10222-5	FF	S+Q	750	38000	14
1.3964 acc. to SEW390 and VG81237 (WL1.3964)	FF	S+Q	400	3000	3

FF: open die forgings (incl. bars)      N: normalized      N+T: normalized + tempered      Q+T: quenched + tempered  
 S+Q: solution annealed + quenched