

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

Rohrwerk Maxhütte GmbH
Rosenbachstraße 11, Sulzbach-Rosenberg,
Germany

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Product	Pipes
Application area	Pipes for pressure systems,
Steel type	Carbon and carbon-manganese,
	Alloy,
	See page 2
Manufacturing method	Seamless,
	Hot formed
Max. outer diameter	See page 2
Max. wall thickness	See page 2
Heat treatment condition	Normalized, normalized and tempered
	See page 2
Additional approval conditions	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 **2019-01-22**

for **DNV GL**

This Certificate is valid until **2021-12-31**.

DNV GL local station: **Augsburg**

Approval Engineer: **Enno Brück**

Thorsten Lohmann
Head of Section



Particulars of the approval

Pipes for pressure systems

Steel type /grade ^{3) 4)}	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition ²⁾
C and C-Mn	HFS	140	13	N, NT
Alloy	HFS	140	13	N, NT

Remarks:

- 1) HFS: hot finished seamless
- 2) N: Normalised
NT: Normalised and tempered
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Suitable pipe grades shall be selected from the following recognised standards:
ISO 9329 Parts 1 and 2, ISO 9330 Parts 1 and 2, EN 10216 Parts 1 to 3, EN 10217 Parts 1 to 3, EN 10305 Part 1 and 2, ASTM A53, ASTM A106, ASTM A135, ASTM A335, JIS G3454, JIS G3455, JIS G3456 and JIS G3458

Special conditions:

- Including automatic non-destructive testing in place of hydraulic testing according to relevant piping standard