

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That
Mannesmannröhren-Werk GmbH
Zeithain,
Germany

is an approved manufacturer of
Steel Pipes and Fittings

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

and the following particulars:

Product	Pipes
Application area	Pipes for pressure systems Pipes for low-temperature service, Boiler and superheater tubes
Steel type(s)	Carbon and carbon-manganese
Manufacturing method	Seamless
Max. outer diameter	See page 2
Max. wall thickness	See page 2
Heat treatment 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 **2018-07-13**

for **DNV GL**

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

DNV GL local station: **Magdeburg**

Approval Engineer: **Andreas Koch**

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Thorsten Lohmann
Head of Section



Job Id: **263.11-004546-2**
Certificate No: **AMMM000025E**

Particulars of the approval

**Pipes for pressure systems
Pipes for low-temperature service,
Boiler and superheater tubes**

Steel type /grade ³⁾	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Delivery condition ²⁾
C and C-Mn	HFS	114,3	17,5	N

Remarks:

- 1) HFS: hot finished seamless
- 2) N: Normalised
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules