

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

**Salzgitter Mannesmann Stainless Tubes Deutschland GmbH
Bahnstraße 61, 42859 Remscheid,
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, Pipes for low-temperature service, Boiler and superheater tubes
Steel type(s)	Carbon and carbon manganese
Process	Seamless, cold formed
Max. outer diameter	See page 2
Max. wall thickness	See page 2
Heat treatment condition	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 **2018-06-13**

for **DNV GL**

This Certificate is valid until **2020-12-31**.

DNV GL local station: **Essen**

Approval Engineer: **Christian Wildhagen**

Thorsten Lohmann
Head of Section



Particulars of the approval

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

Grade ³⁾	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Delivery condition ²⁾
Seamless pipes acc. EN 10216-1, EN 10216-2, EN 10216-3 and EN 10216-4				
P235TR2	CFS	385	25	N
P265TR2	CFS	385	25	N
P355N	CFS	385	25	N
P235GH	CFS	385	25	N
16Mo3	CFS	385	25	N
13CrMo4-5	CFS	385	25	NT
10CrMo9-10	CFS	385	25	NT
13MnNi6-3	CFS	385	25	N
12Ni14	CFS	385	25	NT, QT
Seamless pipes acc. EN 10297-1 ⁴⁾				
C22E	CFS	385	25	N, QT
C35E	CFS	385	25	N, QT
C45E	CFS	385	25	N, QT
C60E	CFS	385	25	N, QT
38Mn6	CFS	385	25	N, QT
Seamless pipes acc. MPT specifications ⁴⁾ (EN 10305-1 basic standard)				
MW-Grade 540SWB acc. TMDS 1004	CFS	385	25	Acc. specification
MW-Grade 600MOD acc. TMDS 1005	CFS	385	25	Acc. specification
MW-Grade 650MOD acc. TMDS 1006	CFS	385	25	Acc. specification
MW-Grade 700MOD acc. TMDS 1007	CFS	385	25	Acc. specification
MW-Grade 620SWB acc. TMDS 1017	CFS	385	25	Acc. specification
MW-Grade 620MOD acc. TMDS 1020	CFS	385	25	Acc. specification
MW-Grade 355 acc. TMDS 1008	CFS	385	25	Acc. specification
MW-Grade 460 acc. TMDS 1009	CFS	385	25	Acc. specification
MW-Grade 520 acc. TMDS 1003	CFS	385	25	Acc. specification
MW-Grade 550 acc. TMDS 1001	CFS	385	25	Acc. specification
MW-Grade 660 acc. TMDS 1002	CFS	385	25	Acc. specification

Remarks:



Job Id: **263.11-001750-3**
Certificate No: **AMMM0000237**

- 1) CFS: cold finished seamless
- 2) N: Normalised
NT: Normalised and tempered
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
- 4) Possible application and certification of any material to classed object is subject to case by case approval