APPROVAL OF MANUFACTURER CERTIFICATE

Certificate no.:
AMMM00002EX
Revision No:
3

This is to certify:

that

Mannesmann Line Pipe GmbH
Kissinger Weg 55, 59067 Hamm,
Germany

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with

DNV rules for classification – Ships
DNV-OS-B101 – Metallic materials
DNV class programme – DNV-CP-0252 Steel pipes and steel pipe fittings
DNV class programme – DNV-CP-0347 Steel hollow sections

and the following particulars:

Product	**Pipes** **Structural hollow sections**
Application area	**Pipes for pressure systems,** **Pipes for low-temperature service,** **Boiler and superheater tubes,** **Normal strength steel,** **High strength steel**
Steel type	**Carbon and carbon-manganese**
Manufacturing method	**Welded**
Max. outer diameter	**See page 2, 3**
Max. wall thickness	**See page 2, 3**
Heat treatment condition	**See page 2, 3**

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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2025-11-25**

This Certificate is valid until **2027-06-30**.
DNV local unit: **Essen**

Approval Engineer: **Christian Wildhagen**

for **DNV**
This document has been digitally signed and will therefore not have handwritten signature
Stefan Röhr

Particulars of the approval

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

Steel type / grade [3)4)5)]	Manufacturing method [1)]	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition [2)]
Carbon and carbon-manganese	HFI / HFW	610	25.4	N

Structural hollow sections

Steel type / grade	Manufacturing method [1)]	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition [2)]
Structural hollow sections acc. EN 10219-1 [6)]				
S235JRH, S275J0H, S275J2H, S355J0H, S355J2H, S355K2H, S355NH, S355NLH	HFI / HFW	610	25.4	Acc. standard
Structural hollow sections acc. EN 10210-1 [6)] (round / square / rectangular)				
S235JRH, S275J0H, S275J2H, S275NH, S275NLH, S355J0H, S355J2H, S355K2H, S355NH, S355NLH, S420NH, S420NLH, S460NH, S460NLH	HFI / HFW	610 400 x 400 500 x 300	25.4	N
Structural hollow sections acc. acc. EN 10225-3 [6)] (round / square / rectangular)				
S355NHHO (S355G1+N), S355NLHHO (S355G13+N, S355G14+N)	HFI / HFW	610 400 x 400 500 x 300	25.4	N
Structural hollow sections acc. acc. EN 10225-4 [6)]				
S355NLHCO (S355G13+N)	HFI / HFW	610	25.4	N
Structural hollow sections acc. DNV-OS_B101 and DNV RU-Ship Pt.2 Ch.2 (round / square / rectangular)				
NV D36	HFI / HFW	610 400 x 400 500 x 300	25.4	N

Pipes acc. international standards

Steel type / grade [6]	Manufacturing method [1]	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition [2]
Pipes acc. ISO 3183				
L245ME, L245NE, L290ME, L290NE, L360ME, L360NE, L415ME, L415NE, L450ME, L485ME	HFI / HFW	610	25.4	N / TM
Pipes acc. API 5L (PSL1/PSL2)				
B, X42, X52, X60, X65, X70 BN, X42N, X52N, X60N BM, X42M, X52M, X60M, X65M, X70M	HFI / HFW	610	25.4	N / TM

Remarks:

1) HFI: high-frequency induction welding
HFW: high-frequency welding
2) N: Normalised
3) TM: thermo-mechanical rolling
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 or JIS G3458
5) Suitable pipe grades shall be selected from the following recognised standards:
ISO 9329 Part 3, ISO 9330 Part 3, EN 10216 Part 4, EN 10217 Part 6, ASTM A333, ASTM A334 or JIS G3460
6) Suitable pipe grades shall be selected from the following recognised standards:
ISO 9329 Part 2, ISO 9330 Part 2, EN 10216 Part 2, EN 10217 Part 2, ASTM A178, ASTM A209, ASTM A210, ASTM A213, JIS G3461, JIS G3462 or JIS G3463
7) Possible application and certification of any material to classed object is subject to case by case approval