

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

TRINECKÉ ŽELEZÁRNY, a.s. VT - VÁLCOVNA TRUB
Výstavní 1132, Ostrava - Vítkovice, Czech Republic

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with
DNV GL rules for classification – Ships
DNVGL-OS-B101 – Metallic materials

and the following particulars:

| | |
|---------------------------------|---|
| Product | Pipes |
| Application area | Pipes for pressure systems, Boiler and superheater tubes |
| Steel type | 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 **2020-07-21**

for **DNV GL**

This Certificate is valid until **2022-12-31**.

DNV GL local station: **Prague CMC**

Approval Engineer: **Christian Wildhagen**

Thorsten Lohmann
Head of Section

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Job Id: **263.11-010929-1**
Certificate No: **AMMM0000148**
Revision No: **1**

Particulars of the approval

Pipes for pressure systems

| Steel type /grade ¹⁾ | Manufacturing method ¹⁾ | Max. outer diameter [mm] | Max. wall thickness [mm] | Heat treatment condition |
|---------------------------------|------------------------------------|--------------------------|--------------------------|--------------------------|
| C and C-Mn | Seamless | 406.4 | 60 | Acc. standard |

Boiler and superheater tubes

| Steel type /grade ²⁾ | Manufacturing method ¹⁾ | Max. outer diameter [mm] | Max. wall thickness [mm] | Heat treatment condition |
|---------------------------------|------------------------------------|--------------------------|--------------------------|--------------------------|
| C and C-Mn | Seamless | 406.4 | 60 | Acc. standard |

Remarks:

- 1) Pipes for pressure systems
Suitable pipe grades shall be selected from the following recognized 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
- 2) Boiler and superheater tubes
Suitable pipe grades shall be selected from the following recognized 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