

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

LIBERTY OSTRAVA TUBULAR PRODUCTS a.s.
Vratimovská 689, 707 02 Ostrava-Kunčice,
Czech Republic

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, Boiler and superheater tubes, Pipes for structural application
Steel type	Carbon and carbon-manganese, Alloy, See page 2
Manufacturing method	Seamless
Max. outer diameter	273 mm
Max. wall thickness	20 mm
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 **2019-11-19**

for **DNV GL**

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

DNV GL local station: **Prague**

Approval Engineer: **Christian Wildhagen**

Thorsten Lohmann
Head of Section



Job Id: **263.11-010354-1**
Certificate No: **AMMM000026N**
Revision No: **2**

Particulars of the approval

Pipes for pressure systems

Steel type ²⁾³⁾	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Delivery condition
C and C-Mn	HFS	273	20	Acc. standard
Alloy	HFS	273	20	Acc. standard

Boiler and superheater tubes

Steel type ²⁾⁴⁾	Manufacturing method ¹⁾	Max. outer diameter [mm]	Max. wall thickness [mm]	Delivery condition
C and C-Mn	HFS	273	20	Acc. standard
Alloy	HFS	273	20	Acc. standard

Remarks:

- 1) HFS: hot finished seamless
- 2) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 3) 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
- 4) 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 and JIS G3463

Special conditions:

- Including automatic eddy current testing in lieu of hydraulic testing according to relevant piping standard for tubes with the following dimensions:
 - Outer diameter 21.3 - 51.0 mm,
 - Wall thickness 2.3 - 5.0 mm
- Including seamless pipes for structural applications (hollow sections) in comparable steel grades according EN 10210 and equivalent standards