

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

Vítkovické slévárny spol. s r.o.
OSTRAVA-VÍTKOVICE, Czech Republic

is an approved manufacturer of
Steel Castings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Castings for hull structures and equipment
Steel type(s)	Casting for machinery Carbon, Carbon-Manganese, Alloy
Casting method	Sand casting
Max. weight	See page 2
Max. wall thickness	See page 2
Heat treatment condition	Normalized

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 **2017-12-28**

for **DNV GL**

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

DNV GL local station: **Ostrava**

Approval Engineer: **Stefan Röhr**

Thorsten Lohmann
Head of Section



Particulars of the approval

Castings for hull structure and equipment

Steel type	Grade ⁴⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Delivery condition ²⁾
C and C-Mn	VL C400UW, VL C440UW, VL C480UW, VL C520UW, VL C560UW, VL C600UW	SC	8 700	1 000	N
C and C-Mn	GE240, GE300 acc. EN 10293 ³⁾	SC	8 700	1 000	N
Alloy	VL C550AW, VL C620AW	SC	8 700	1 000	QT, NT ⁵⁾

Castings for machinery

Steel type	Grade ⁴⁾	Casting method ¹⁾	Max. weight [kg]	Max. section / wall thickness [mm]	Delivery condition ²⁾
C and C-Mn	VL C400U, VL C440U, VL C480U, VL C520U, VL C560U, VL C600U	SC	8 700	1 000	N
Alloy	VL C550A, VL C600A	SC	8 700	1 000	QT, NT ⁵⁾

Remarks:

- 1) SC: Sand Casting
- 2) N: Normalised
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Including equivalent grades to other standards, e.g. DIN 1681, DIN 17182, DIN 17205
- 5) The specified mechanical properties shall be agreed with the Society in case of delivery in normalized and tempered condition