

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001K9
Revision No:
1

This is to certify:

That

VITKOVICE HAMMERING, a.s.
Ruská 2887/101, 703 00, Ostrava - Vítkovice,
Czech Republic

is an approved manufacturer of
Steel Forgings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Forgings for hull structures and equipment, Forgings for shafting and machinery, Bolts and nuts
Steel type	Carbon and carbon-manganese, Alloy, See page 2
Forging method	Open die forging
Max. weight	See page 2
Max. diameter	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 **2020-07-23**

for **DNV GL**

This Certificate is valid until **2023-06-30**.

DNV GL local station: **Prague CMC**

Approval Engineer: **Christian Wildhagen**

Thorsten Lohmann
Head of Section

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Job Id: **263.11-007824-2**
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Particulars of the approval

Forgings for hull structures and equipment

Bolts and nuts

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. diameter [mm]	Heat treatment condition ²⁾
C and C-Mn	VL F400UW, VL F440UW, VL F480UW, VL F520UW, VL F560UW, VL F600UW	OD	8 000	500	N, NT, QT
Alloy	VL F550AW, VL F600AW, VL F650AW	OD	8 000	500	QT

Forgings for shafting and machinery

Bolts and nuts

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. diameter [mm]	Heat treatment condition ²⁾
C and C-Mn	VL F400U, VL F440U, VL F480U, VL F520U, VL F560U, VL F600U, VL F640U, VL F680U, VL F720U, VL F760U	OD	8 000	500	N, NT, QT
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	OD	8 000	500	QT

Forgings for boilers, pressure vessels and piping systems

Bolts and nuts

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. diameter [mm]	Heat treatment condition ²⁾
C and C-Mn	VL F450H, VL F490H	OD	8 000	500	N, NT, QT
Alloy	VL F0.5Mo, VL F1Cr0.5Mo	OD	8 000	500	NT, QT
	VL F2.25Cr1Mo	OD	8 000	500	N, QT

Remarks:

- 1) OD: Open die forging
- 2) QT: Quenched and tempered
N: Normalised
NT: Normalised and tempered
- 3) Incl. equivalent grades in acc. to other standards