

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00000HX
Revision No:
2

This is to certify:

That
FORJA ROTEC SRL
Buzau, Romania

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
Steel type	Carbon and carbon-manganese, Alloy
Forging method	See page 2
Max. weight	10 650 kg for carbon and carbon-manganese steel 5 000 kg for alloy steel
Max. diameter / section	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 **2019-12-15**

for **DNV GL**

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

DNV GL local station: **Galatz**

Approval Engineer: **Andreas Koch**

Thorsten Lohmann
Head of Section



Job Id: **263.11-005830-3**
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Particulars of the approval

Forgings for hull structures and equipment

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. diameter / section [mm]	Heat treatment condition ²⁾
C and C-Mn	VL F400UW, VL F440UW, VL F480UW, VL F520UW, VL F560UW, VL F600UW	OD, CD	10 650	-	N, NT, QT
Alloy	VL F550AW, VL F600AW, VL F650AW	OD, CD	5 000	-	QT
Alloy	VL F550AW, VL F600AW, VL F650AW	RR	5 000	3 000	QT

Forgings for shafting and machinery

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. diameter / section [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, CD	10 650	-	N, NT, QT
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	OD, CD	5 000	-	QT
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	RR	5 000	3 000	QT

Remarks:

- 1) OD: Open die forging
CD: Closed die forging
RR: Ring Rolling
- 2) QT: Quenched and tempered
N: Normalized
NT: Normalized and tempered
- 3) Incl. equivalent grades in acc. to other standards