

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

FRIULFORGIA S.r.l. Unipersonale
Località Pannellia, 55-33039-Sedegliano (UD), Italy

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 Open die forging, see page 2
Max. weight	See page 2
Heat treatment condition	Normalized, normalized and tempered, quenched and tempered, 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 **2018-05-09**

for **DNV GL**

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

DNV GL local station: **Venice**

Approval Engineer: **Enno Brück**

Thorsten Lohmann
Head of Section



Particulars of the approval

Forgings for hull structures and equipment

Steel type	Grade ³⁾⁴⁾	Forging method ¹⁾	Max. weight [kg]	Delivery condition ²⁾
C and C-Mn	VL F400UW, VL F440UW, VL F480UW, VL F520UW, VL F560UW, VL F600UW	OD	25 000	N, NT, QT
Alloy	VL F550AW, VL F620AW, VL F650AW	OD	25 000	QT

Forgings for shafting and machinery

Steel type	Grade ³⁾⁴⁾	Forging method ¹⁾	Max. weight [kg]	Delivery 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	25 000	N, NT, QT
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	OD	25 000	QT

Remarks:

- 1) OD: Open die forging
- 2) QT: Quenched and tempered
N: Normalised
NT: Normalised and tempered
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Incl. equivalent grades in acc. to other standards