

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That
Clifford-Jacobs Forging Company
Champaign, IL, USA

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	Alloy
Forging method	see page 2
Max. weight	400 kg
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 **2018-05-30**

for **DNV GL**

This Certificate is valid until **2021-06-29**.

DNV GL local station: **Houston**

Approval Engineer: **Torben Schälicke**

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Thorsten Lohmann
Head of Section



Job Id: **263.11-004313-2**
Certificate No: **AMMM000022N**

Particulars of the approval

Forgings for hull structures and equipment

Steel type	Grade ³⁾⁴⁾	Forging method ¹⁾	Max. weight [kg]	Delivery condition ²⁾
Alloy	VL F550AW, VL F620AW, VL F650AW	OD	400	QT

Forgings for shafting and machinery

Steel type	Grade ³⁾⁴⁾	Forging method ¹⁾	Max. weight [kg]	Delivery condition ²⁾
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	OD	400	QT

Remarks:

- 1) OD: Open die forging
- 2) QT: Quenched 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