

APPROVAL OF MANUFACTURER **CERTIFICATE**

Certificate No: AMMM000022N Revision No:

This is to certify:

Clifford-Jacobs Forging Company 2410 N 5th St Champaign, IL 61822, **USA**

is an approved manufacturer of **Steel Forgings**

in accordance with

DNV rules for classification - Ships DNV class programme - DNV-CP-0247 Steel forgings

and the following particulars:

Forgings for hull structures and equipment **Application area**

Forgings for shafting and machinery

Steel type Alloy Forging method see page 2 Max. weight 400 kg Max. diameter / section see page 2 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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at Hamburg on 2024-06-05

This Certificate is valid until 2027-06-29.

DNV local unit: Certification & Inspection Services

Approval Engineer: Andreas Koch



for **DNV**

This document has been digitally signed and will therefore not have handwritten signature

Christian Wildhagen

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD



Form code: AM 311 Revision: 2022-12 www.dnv.com Page 1 of 2



Job Id: 263.11-004313-4 AMMM000022N Certificate No:

Revision No:

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⁾
Alloy	NV F550AW, NV F620AW, NV F650AW	OD	400	400	QT

Forgings for shafting and machinery

Steel type	Grade ³⁾	Forging method 1)	Max. weight [kg]	Max. diameter / section [mm]	Heat treatment condition ²⁾
Alloy	NV F600A, NV F700A, NV F800A,NV F900A, NV F1000A, NV F1100A	OD	400	400	QT

Remarks:

1) OD: Open die forging 2) QT: Quenched and tempered

3) Incl. equivalent grades in acc. to other standards

Form code: AM 311 Revision: 2022-12 www.dnv.com Page 2 of 2