



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00002F8
Revision No:
2

This is to certify:

That

Jinlei Technology Co., Ltd.
JNo. 118, Shuangquan Road, Gangcheng District, Jinan, Shandong,
China

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:

Application area	Forgings for hull structures and equipment
Steel type(s)	Forgings for shafting and machinery
	Carbon, Carbon-Manganese,
	Alloy
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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2024-07-04**

This Certificate is valid until **2025-02-11**.

DNV local unit: **Qingdao NB & CMC**

Approval Engineer: **Torben Schällicke**



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

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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 [mm]	Heat treatment condition ²⁾
C and C-Mn	NV F400UW, NV F440UW, NV F480UW, NV F520UW, NV F560UW, NV F560UW	OD	70 000	1360	N, NT
	S325G [1.0570] acc. to EN 10250-2	OD	70 000	1360 ⁴⁾	N, NT

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	NV F400U, NV F440U, NV F480U, NV F520U, NV F560U, NV F600U, NV F640U, NV F680U	OD	70 000	1360	N, NT, QT
	C45E [1.1191] acc. to EN 10250-2	OD	50 000	950	QT, NT
	S325G [1.0570] acc. to EN 10250-2	OD	70 000	1360 ⁴⁾	N, NT
Alloy	NV F600A, NV F700A, NV F800A	OD	70 000	1360	QT
	42CrMo4 [1.7225] acc. to EN 10250-3	OD	70 000	1360 ⁴⁾	QT

Remarks:

- 1) OD: Open die forging
- 2) QT: Quenched and tempered
N: Normalized
NT: Normalized and tempered
- 3) Incl. equivalent grades according to other standards
- 4) Mechanical properties according to EN 10250-2/3 up to product diameter of 500 mm. For larger product thicknesses, values to be agreed based on DNV approved drawing rules.