

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001JV
Revision No:
1**This is to certify:**

That

Wilhelm Maass GmbH
Zeche Ernestine 18, 45141 Essen,
Germanyis an approved manufacturer of
Steel Forgingsin accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Stainless steel forgings, Forgings
Steel type	Austenitic stainless, Ferritic-austenitic (duplex) stainless, Nickel-base alloy, See page 2
Forging method	Closed die forging
Max. weight	See page 2
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 **2020-09-03**This Certificate is valid until **2023-07-31**.DNV GL local station: **Essen**Approval Engineer: **Christian Wildhagen**

for **DNV GL**
Digitally Signed By: Roehr, Stefan
Location: DNV GL Hamburg, Germany
Signing Date: 03.09.2020 , on behalf of

Thorsten Lohmann
Head of Section

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **263.11-003971-3**
Certificate No: **AMMM00001JV**
Revision No: **1**

Particulars of the approval

Stainless steel forgings

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition ²⁾
Austenitic		CD	250	750	SHT
Ferritic-austenitic	22 Cr Duplex	CD	250	750	SHT
	25 Cr Duplex	CD	250	750	SHT

Nickel-base forgings

Alloy type	Grade ⁴⁾	Forging method ¹⁾	Max. weight [kg]	Max. diameter / section [mm]	Heat treatment condition ²⁾
Ni-base	2.4856 acc. to DIN 17744 (UNS N06625 acc. to ASTM B446)	CD	250	750	SHT

Remarks:

- 1) CD: Closed die forging
- 2) SHT: Solution Heat Treated (Solution Annealing)
- 3) Stainless steel forgings shall be in accordance with recognized standards, e.g. EN 10222, ASTM A473/A965/A1049 and JIS G 3214, provided that supplementary requirements contained herein are also met. Recognition of other standards is subject to submission to the Society for evaluation.
- 4) Possible application and certification of any material to classed object is subject to case by case approval