



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00000EY
Revision No:
2

This is to certify:

That

Frese Metal & Stålstøberi A/S
Sorøvej 6, 4200 Slagelse,
Denmark

is an approved manufacturer of
Copper Alloy Castings

in accordance with
DNV rules for classification – Ships

and the following particulars:

Application area	Castings for valves, Fittings and general application
Alloy type	Castings for propellers Al-bronze, Pb-Sn-bronze, Mn-bronze (NV Cu1), Ni-Al-bronze (NV Cu3),
Manufacturing method	See page 2
Max. weight	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 **2022-03-25**

for **DNV**

This Certificate is valid until **2025-03-09**.

DNV local station: **Copenhagen Fleet In Service**

Approval Engineer: **Andreas Koch**

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Thorsten Lohmann
Head of Section

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Form code: AM 311

Revision: 2021-03

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Particulars of the approval

Castings for valves, fittings and general application

Alloy type	Casting method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
Al-bronze	SC	2 000	AC
Pb-Sn Bronze	SC	2 000	AC

Castings for propellers

Alloy type	Grade	Casting method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
Mn-bronze	NV Cu1	SC	2 000	AC
Ni-Al-bronze	NV Cu3	SC	2 000	AC

Remarks:

- ¹⁾ SC: Sand Casting
- ²⁾ AC: As cast