

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00002S8
Revision No:
1

This is to certify:

That

Traryds Metall AB
Gränsvägen 4, 287 34, Strömsnäsbruk, Sweden

is an approved manufacturer of
Copper Alloy Castings

in accordance with

DNV rules for classification – Ships
DNV class programme – DNV-CP-0251 Copper alloy castings

and the following particulars:

Application area	Castings for valves, fittings and general application, Castings for propeller parts
Alloy type	Sn-bronze, Pb-Sn-bronze, Ni-Al-bronze (VL Cu3) Gunmetal Leaded gunmetal
Manufacturing method	Sand casting
Max. weight	See page 2
Max. wall thickness	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 **2024-02-23**

This Certificate is valid until **2026-06-30**.
DNV local unit: **Sweden Fleet In Service**

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.



Particulars of the approval

Castings for valves, fittings and general application

Alloy type/grade	Casting method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition ²⁾
Sn-bronze	SC	150	75	AC
Pb-Sn-bronze	SC	150	75	AC
Ni-Al-bronze	SC	150	75	AC
Gunmetal	SC	150	75	AC
Leaded gunmetal	SC	150	75	AC

Castings for propeller parts

Alloy type	Grade	Casting method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition ²⁾
Ni-Al-bronze	NV Cu3	SC	150	75	AC

Remarks:

¹⁾ SC: Sand Casting

²⁾ AC: As cast

Additional approval conditions

Weld repairs: not allowed.