

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001UY
Revision No:
1

This is to certify:

That
Non Ferro Gieterij Oldenzaal B.V.
Kleibultweg 109, 7575 PB Oldenzaal,
Netherlands

is an approved manufacturer of
Copper Alloy Castings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Castings for valves, fittings and general application
Alloy type	Al-bronze, Sn-bronze, Pb-Sn-bronze, Ni-Al-bronze (VL Cu3), Mn-Al-bronze (VL Cu4)
Manufacturing method	Sand casting
Max. weight	5 000 kg
Max. wall thickness	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 **2020-11-23**

for **DNV GL**

This Certificate is valid until **2023-12-31**.

DNV GL local station: **Netherlands FIS**

Approval Engineer: **Andreas Koch**

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Thorsten Lohmann
Head of Section

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Job Id: **263.11-001946-4**
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Particulars of the approval

Castings for valves, fittings and general application

Alloy type	Grade ³⁾	Casting method ¹⁾	Max. weight [kg]	Max. wall thickness [mm]	Delivery condition ²⁾
Sn-bronze		SC	5 000	400	AC
PbSn-bronze		SC	5 000	400	AC
Al-bronze		SC	5 000	400	AC
Ni-Al-bronze	VL Cu3	SC	5 000	400	AC
Mn-Al-bronze	VL Cu4	SC	5 000	400	AC

Remarks:

- 1) SC: Sand Casting
- 2) AC: As cast
- 3) Incl. equivalent grades in acc. to other standards