

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00000TD**  
Revision No:  
**1**

**This is to certify:**

**That**

**Eredi Caglioni s.n.c. di Paolo e Lorenzo Caglioni**  
**24050 Orio al Serio, BG, Italy**

is an approved manufacturer of  
**Copper Alloy Castings**

in accordance with  
**DNV GL rules for classification – Ships**

and the following particulars:

<b>Application area</b>	<b>Castings for valves, fittings and general application</b>
<b>Alloy type</b>	<b>Al-bronze</b>
<b>Manufacturing method</b>	<b>Sand casting</b>
<b>Max. weight</b>	<b>See page 2</b>
<b>Max. wall thickness</b>	<b>See page 2</b>
<b>Heat treatment condition</b>	<b>See page 2</b>
<b>Additional approval conditions</b>	<b>See page 2</b>

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 **2019-05-21**

for **DNV GL**

This Certificate is valid until **2022-06-30**.

DNV GL local station: **Milan**

Approval Engineer: **Stefan Röhr**

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**Thorsten Lohmann**  
**Head of Section**



Job Id: **263.11-006344-2**  
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## Particulars of the approval

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### Castings for valves, fittings and general application

Alloy type	Grade <sup>3)</sup>	Casting method <sup>1)</sup>	Max. weight [kg]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
Al-bronze	C95800 acc. to ASTM B148	SC	1 500	300	AC
Al-bronze	CC333G (CuAl10Fe5Ni5-C) acc. to EN 1982	SC	1 500	300	AC

Remarks:

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