



**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF  
MATERIALS**  
No. **FAB164320XT/003**

**This is to certify** that the manufacture of the product identified below is in compliance with the applicable requirements of the RINA Rules for the Approval of Manufacturers of Materials.

<i>Description</i>	<b>Castings</b>
<i>Type</i>	<b>Copper Alloy Casting</b>
<i>Manufacturer</i>	<b>DIKKAN METAL ÜRÜNLERİ SAN.TIC. A.S.</b>
<i>Place of manufacture</i>	<b>KEMALPASA ASFALTI NO:30 HAYITLIKIR MEVKII ULUCAK KÖYÜ, KEMALPASA,IZMIR TURKEY</b>
<i>Reference standards</i>	<b>RINA Rules for the approval of manufacturers of materials</b>

*Issued in* **ISTANBUL** on **January 27, 2021**. *This Certificate is valid until* **January 26, 2026**

 **Volkan Kaya**  
Marine Surveyor  
RINA Istanbul  
28462  
RINA Services S.p.A.  
**Volkan Kaya**

This certificate consists of this page and 1 enclosure

**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF MATERIALS**No. **FAB164320XT/003****Enclosure - Page 1 of 1****Copper Alloy Casting****APPROVAL CONDITIONS****Product Description:** Copper Alloy Casting

	<b>Alloy Type</b>	<b>Designation</b>	<b>Tonnes Max.</b>
<b>Long Freezing Range Alloys</b>	Phosphor bronze	CuSn10PbP	2.00
		CuSn10	2.00
		CuSn11P	2.00
		CuSn12	2.00
	Gun Metal	CuSn10Zn2	2.00
	Leaded Gun Metal	CuSn5Pb5Zn5	2.00
		CuSn7Pb3Zn3	2.00
	Leaded bronze	CuSn10Pb10	2.00
		CuSn5Pb9	2.00
		CuSn9Pb15	2.00
CuSn5Pb20		2.00	
<b>Short Freezing Range Alloys</b>	Copper %30 Nickel	CuNi30Cr	2.00
		CuNi30Nb	2.00
	Copper %10 Nickel	CuNi10Nb	2.00
	Aluminium Bronze	CuAl10Fe5Ni5	2.00
		CuAl11Fe6Ni6	2.00

**Casting Weight:** 2000 kg.**Casting method :** Sand Casting and Centrifugal Casting**Delivery condition :** No Heat Treatment**Survey conditions:** all castings to be used for construction of ships classed with RINA are to be in compliance with the requirements of the RINA Rules and are to be tested accordingly.**General conditions for the approval**

-The approval is granted on condition that the RINA Rules for the approval, manufacture, testing and certification of materials are complied with in all respects.

-RINA is to be notified of any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate.

**ISTANBUL 27/01/2021**