



Certificate No : MD00/3206/0005/7b

RAGUSE + VOSS
Metallgießerei GmbH
Grauwalling 24
27580 Bremerhaven
Germany

has been approved as a manufacturer in accordance with the requirements of Lloyd's Register for :-

Copper Alloy Castings for Valves, Liners, Bushes and Fittings

This approval is subject to compliance with the Rules for the Manufacture, Testing and Certification of Materials. The full details of the processes and grades to which this approval applies are given in the Appendix of this certificate.

Lloyd's Register is to be notified of any change that may affect the validity of this Certificate.

This Certificate is issued to the above manufacturer and is valid until the date given below.

Valid Until : 30 November 2018
Date of Issue : 17 December 2015

Clive Arnold

Senior Metallurgical Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group



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Appendix 1

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Long freezing range alloys	Alloy Type	Designation	tonnes Maximum
Long freezing range alloys	Phosphor bronze	CuSn10PbP*	0.60
		CuSn10P*	0.60
		CuSn11P	0.60
		CuSn12	0.60
		CuSn10*	0.60
	Gunmetal	CuSn10Zn2	0.60
		Leaded gunmetal	CuSn5Pb5Zn5
	Leaded bronze	CuSn7Pb3Zn3*	0.60
		CuSn10Pb10	0.60
		CuSn5Pb9	0.60
CuSn9Pb15*		0.60	
CuSn5Pb20		0.60	
Short freezing range alloys	Alloy Type	Designation	tonnes Maximum
Copper 30% nickel	Copper 30% nickel	CuNi30Cr*	0.20
		CuNi30Nb*	0.20
Aluminium bronze	Aluminium bronze	CuAl10Fe5Ni5	0.20
		CuAl9Ni*	0.20
		CuAl9Ni7*	0.20
		CuAl11Ni*	0.20

* Accepted for approved applications only.

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