

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00000KB
Revision No:
1

This is to certify:

That
KME Germany GmbH & Co. KG
Menden, Germany

is an approved manufacturer of
Wrought Copper and Copper Alloys

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Copper and copper alloy tubes
Alloy type(s)	Copper and copper alloys
Manufacturing method	Seamless cold forming process Seamless hot forming process
Max. outer diameter	133 mm
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.

This Certificate is valid until **2021-06-30**.

Issued at **Hamburg** on **2018-07-10**

DNV GL local station: **Essen**

Approval Engineer: **Torben Schälicke**

for **DNV GL**

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Thorsten Lohmann
Head of Section

Job Id: **263.11-008847-1**
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Particulars of the approval

Copper and copper alloy tubes

Steel type	Grade ^{3) 4)}	Manufacturing method ¹⁾	Max. outer diameter [mm]	Delivery condition ²⁾
Copper and copper alloys acc. to following standard:				
Copper and copper alloys	acc. to EN 12449	HFS, CFS	133	According applicable standard
	acc. to EN 12451	HFS, CFS	133	
	acc. to DIN 85004-4	HFS, CFS	133	

Remarks:

- 1) HFS: hot finished seamless
CFS: cold finished seamless
- 2) According applicable standard
- 3) Certification of any material applied to classed object shall fulfill the applicable material requirements in the DNV GL class rules
- 4) Possible application and certification of any material to classed object is subject to case by case approval