

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

NI ROBO Metallverarbeitungs-GmbH
Mainhausen, Germany

is an approved manufacturer of
Wrought Copper and Copper Alloys

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Products	Seamless fittings
Alloy type(s)	Copper-Nickel
Process	Cold forming process,
Dimensions	Outer diameter maximum 406.4 mm
Remarks	See particulars of the approval

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules.

This Certificate is valid until **2019-02-28**.

Issued at **Hamburg** on **2016-06-10**

DNV GL local station: **Augsburg**

Approval Engineer: **Christian Wildhagen**



for **DNV GL**

Digitally Signed By: Lohmann, Thorsten

Location: DNV GL Hamburg, Germany

Signing Date: 2016-06-10

Thorsten Lohmann
Head of Section

Job Id: 263.11-005750-1
Certificate No: AMMM00000MR

Particulars of the approval

Copper alloy fittings:

Grade	Product	Supply Condition	Diameter [mm], max.
CuNi10Fe1,6Mn acc. to DIN 86090	FT	acc. to standard	406.4

FT: fittings

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That
NIROBO Metallverarbeitungs-GmbH
Mainhausen, Germany

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Product	Fittings
Steel type(s)	Austenitic 22Cr duplex stainless
Process	Seamless or welded pipes, Cold forming process
Dimensions	See particulars of the approval
Remarks	See particulars of the approval

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules.

This Certificate is valid until **2019-02-28**.

Issued at **Hamburg** on **2016-08-22**

DNV GL local station: **Augsburg**

Approval Engineer: **Christian Wildhagen**



for **DNV GL**
Digitally Signed By: Roehr, Stefan
Location: DNV GL Hamburg, Germany
Signing Date: 2016-08-23 , on behalf of

Thorsten Lohmann
Head of Section

Job Id: **263.11-005751-1**
Certificate No: **AMMM00000MS**

Particulars of the approval

Pipe fittings:

Standard	Grade	Supply Condition	Diameter [mm], max.	Thickness [mm], max.
EN 10253-4	Austenitic	S+Q	406.4	18
	22Cr duplex stainless	S+Q	115	9

S+Q: solution annealed and quenched