

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00001DS**  
Revision No:  
**1**

**This is to certify:**

**That**

**Rüther Metalltechnik GmbH & Co. KG**  
**58706 Menden, Germany**

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

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

and the following particulars:

<b>Application area</b>	<b>Aluminium Casting Alloys</b>
<b>Alloy type(s)</b>	<b>AlSiMg alloys</b>
<b>Manufacturing process</b>	<b>Sand casting</b>
<b>Max. weight</b>	<b>See page 2</b>
<b>Heat treatment condition</b>	<b>See page 2</b>
<b>Additional approval condition</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 **2020-06-22**

for **DNV GL**

This Certificate is valid until **2022-08-31**.

DNV GL local station: **Essen**

Approval Engineer: **Stefan Röhr**

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

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **263.11-007401-2**  
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## Particulars of the approval

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### Aluminium alloy castings

Grade	Casting method <sup>1)</sup>	Max. weight [kg]	Delivery condition <sup>2) 4) 5)</sup>
EN AC-42000 acc. EN 1706 <sup>3)</sup>	SC	10	AC
EN AC-42100 acc. EN 1706 <sup>3) 4)</sup>	SC	10	T6/F
EN AC-42200 acc. EN 1706 <sup>3) 5)</sup>	SC	10	T6/F
EN AC-42200 acc. HYDAC Specification 10000275369 <sup>3)</sup>	SC	10	AC

#### Remarks:

- 1) SC: Sand Casting
- 2) F: As Cast
- 3) Possible application and certification of any material to classed object is subject to case by case approval
- 4) Grade EN AC-42100 in as cast condition (F) according to customer specification "Rheinfelden-Alloys\_2018"
- 5) Grade EN AC-42200 in as cast condition (F) according to manufacturer specification "Rüther Werkstoffdatenblatt Leg.-Nr.: 79" and according to customer specification "HYDAC Specification Product 10000275369"

#### Additional approval conditions

Any repair of castings by impregnation is subject to case-by-case approval. DNVGL to be informed prior to repair.