



# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM0000343**  
Revision No:  
**1**

This is to certify:

That

**LOIRE INDUSTRIE**  
**Clos Marquet,**  
**42400 Saint-Chamond,**  
**France**

is an approved manufacturer of  
**Wrought Aluminium and Aluminium Alloys**

in accordance with  
**DNV rules for classification – Ships**  
**DNV class programme – DNV-CP-0248 Wrought aluminium alloys**

and the following particulars:

<b>Application area</b>	<b>Wrought Aluminium Alloys</b>
<b>Products</b>	<b>Forgings</b>
<b>Manufacturing method</b>	<b>Open die forging</b>
<b>Max. weight</b>	<b>See page 2</b>
<b>Max. section /wall thickness</b>	<b>See page 2</b>
<b>Heat treatment condition</b>	<b>See page 2</b>
<b>Additional approval conditions</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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2025-02-18**

This Certificate is valid until **2027-01-23**.

for **DNV**

DNV local unit: **France CMC**

Approval Engineer: **Christian Wildhagen**

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.

## Particulars of the approval

### Wrought aluminium alloys

Grade	Manufacturing process	Thickness [mm]	Max. weight [kg]	Heat treatment condition
EN AW-5083	Forging	155	1350	O, H111, H112
EN AW-7075	Forging	300	650	T6
EN AW 7175 <sup>1)</sup>	Forging	300	200	T73

Grade <sup>1)</sup>	Manufacturing process	Thickness [mm]	Max. weight [kg]	Heat treatment condition
5083 acc. LIPP140 Rev. 0	Forging	155	1350	O, H111, H112
7075 acc. LIPP141 Rev. 0	Forging	300	650	T6, T73, T651, T652

Remarks:

- <sup>1)</sup> Possible application and certification of any material to classed object is subject to case by case approval