



Marine & Offshore
Division

Certificate number: 46382/A0 BV

File number: MAT 71991-2016

Product code: 90111

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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APPROVAL CERTIFICATE for MATERIALS

This certificate is issued to

AMAG ROLLING
RANSHOFEN - AUSTRIA

for the type of product

WROUGHT ALUMINIUM ALLOY PRODUCTS

Rolled plates in aluminium alloys 5083 and 5086

Requirements:

Bureau Veritas Rules on Materials and Welding for the Classification of Marine Units

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 10 Oct 2021

For BUREAU VERITAS,

At BV HAMBURG, on 10 Oct 2016,

Udo Storm



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Aluminum alloys rolled plates.

Aluminium alloy grade	Temper condition	Thickness	International Standard
5083	H111	up to 150mm	EN 485-2
	H116	up to 63.5mm	EN 485-2 or ASTM B928
	H321	up to 76.20mm	EN 485-2 or ASTM B928
5086	H116	up to 50mm	EN 485-2 or ASTM B928
		50-63.5mm	AMAG Standard T/09_088

No alloy making. Semi-finished products are casted at AMAG Casting - Ranshofen. Plates are rolled and heat treated as applicable.

2. DOCUMENTS AND DRAWINGS :

Mechanical properties for grade 5086-H116, thickness 50-63.5mm as per AMAG Standard T/09_088:

Grade	Rp0.2 (N/mm ²)	Rm (N/mm ²)	Elongation A%
5086-H116 (50 - 63.5mm)	189.6 min.	268.9 min.	9% min.

As per following documentation issued by AMAG Rolling:

- "AMAG Rolling QM brochure" and organization chart dated 23 June 2016.
- "Rolling mill information" dated 12 May 2016.
- "List of management system manual" dated 08 June 2016.
- Production test plan N° F/09_323 and F/09_322 dated 2016.

3. TEST REPORTS :

As per following test reports issued by AMAG Rolling:

- N° PL/75975/01/12 dated 10 August 2012.
- N° LAB/66653/01/09 and N° LAB/66653/02/09 dated 01& 09 December 2009.
- N° PL/791871/01/16 dated 21 January 2016.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification

5. PRODUCTION SURVEY REQUIREMENTS :

The aluminium alloys rolled plates are to be supplied by AMAG Rolling in compliance with the type and the requirements described in this certificate. This type of product is within the category IBV of Bureau Veritas Rule Note NR320. BV product certificate is required.

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

Nil.

***** END OF CERTIFICATE *****