



Marine & Offshore

Certificate number: 47222/A1 BV

File number: MAT 107807-2016

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

SLIM FUSINA ROLLING Srl - Malcontenta (VE)

Malcontenta (VE) - ITALY

for the type of product

WROUGHT ALUMINIUM ALLOY PRODUCTS

Rolled plates in aluminium alloy 5083 and 5456

Requirements:

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

This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 18 Oct 2021

For Bureau Veritas Marine & Offshore,

At BV VENEZIA, on 02 Aug 2017,

Sandro BRUSEGAN



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 Marine & Offshore. 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 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 Marine & Offshore 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 :

Aluminium alloys rolled products.

Aluminium grade	Type of product	Delivery conditions
5083	Plate	O/H111 with thickness up to 60mm H112 with thickness up to 60mm H116 with thickness up to 60mm H321 with thickness up to 60mm
5083	Sheet and Plate	H128 with thickness from 3mm to 8mm
5456	Sheet and Plate	H116 with thickness from 3mm to 50mm H321 with thickness from 3mm to 50mm

Semi-finished products manufactured at cast house. Plates are rolled and heat treated as applicable.

2. DOCUMENTS AND DRAWINGS :

As per following documentation issued by Alcoa Trasformazioni Srl.:

- General Information about manufacturer and manufacturing process datas, dated 2009.
- As per production route for 5083-H128 dated 20/02/2014.

- Mechanical properties for products with thickness above 50mm are to be as per EN485-2 or ASTM B928, as applicable :

Aluminium grade	Rp0.2 (N/mm ²)	Rm (N/mm ²)	Elongation A%
5083 - O/H111	115min	270min - 345max	14
5083 - H112	115min	270min	10
5083 - H128	215min	305min - 385max	10
5083 - H116/H321	200min	285min	10

3. TEST REPORTS :

As per following documentation issued by Alcoa Trasformazioni Srl.:

- "Alloy 5083 - Statistical summary of chemical composition - Year 2008"; "5083 H321, thickness up to 40mm - Statistical summary 2008"; "5083 H116, thickness up to 40mm - Statistical summary 2008"; "5083 H111, thickness up to 50mm - Statistical summary 2008" dated 2009,
- "Test reports for grade 5083-H321 and 5083-H116, 60mm" dated 23/03/2010 and 01/09/2010; "H128 - A new temper for marine" dated 2013,
- "As welded property evaluations of 5083-H128" dated 2014, Certificates No. 39/14 dated 06/03/2014, No. 17/14 dated 27/02/2014., Test report, grade 5083-H128, thickness up to 8mm dated 21/02/2014; Weldability test report, grade 5083-H128, thickness up to 8mm dated 24/09/2014.

As per following documentation issued by Fusina Rolling Srl.:

- "Process Rout No.24 for 5456 H116", "Process Rout No.24 for 5456 H321" dated 15/11/2016.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

The aluminium alloys plates are to be supplied by Slim Fusina Rolling Srl. 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 :

This certificate replaces approvals number No.21604/B2 BV and No.47222/A0 BV.

*** END OF CERTIFICATE ***