



Marine &amp; Offshore

Certificate number: 12797/C0 BV

File number: MAT 1391/01

Product code: 9012I

*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*

**INDUSTEEL BELGIUM SA - GROUPE ARCELORMITTAL**  
CHARLEROI - BELGIUM

*for the type of product*

**FERRITIC STEEL ROLLED PRODUCTS FOR LOW TEMPERATURE APPLICATIONS**

Hot rolled steel plates made of steel grade 5% Ni and 9% Ni

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

*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: 26 Oct 2023**

**For Bureau Veritas Marine & Offshore,**

At BV ANTWERP, on 26 Oct 2018,

Nele Appels



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](http://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 :**

Hot rolled plates.

<b>Steel grade</b>	<b>Deoxydation practice &amp; Refining</b>	<b>Delivery conditions</b>
5,0 Ni	Killed and Al fine grain treated	Quenched and Tempered (QT) thickness range 4mm to 50mm
9,0 Ni	Killed and Al fine grain treated	Quenched and Tempered (QT) thickness range 4mm to 50mm

Steelmaking by electric arc furnace.

Continuous casting.

Plates made by hot rolling followed by quenching and tempering.

### **2. DOCUMENTS AND DRAWINGS :**

2.1 As per following documents:

- Documentation issued by INDUSTRIEL BELGIUM for approvals number AP/B-01-04-130 and AP/B-01-01-87.
- Quality manual issued by ArcelorMittal and dated April 2012.

2.2 Material specification of 9,0 Ni grades: 9,0 Ni as per Bureau Veritas rules, A553 Type 1 as per ASTM A553, SA-553 as per ASME PV Code 2A, X7Ni9 and X8Ni9 +QT680 as per EN 10028-4.

### **3. TEST REPORTS :**

As per following documents:

- Documentation issued by INDUSTRIEL BELGIUM for approvals number AP/B-01-04-130 and AP/B-01-01-87.
- Report reference CRMC-2011-136 dated 07 September 2011
- "Project 9% Nickel material verification program" dated 1992 issued by S.A. Fabrique de fer de Charleroi.

### **4. APPLICATION / LIMITATION :**

As per Bureau Veritas Materials Rules for Classification.

Low temperature applications with Charpy-V notch energy transverse required at -120°C (grade 5% Ni) or -196°C (grade 9% Ni) with 27J minimum average energy and as per Bureau Veritas Rules for Classification.

### **5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 - The rolled plates are to be supplied by INDUSTRIEL BELGIUM SA - GROUPE ARCELORMITTAL in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

### **6. MARKING OF PRODUCT :**

As per Bureau Veritas Materials Rules for Classification.

### **7. OTHERS :**

This certificat replaces approvals No.12797/A0 BV, and No.12797/B0 BV.

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