



Marine &amp; Offshore

Certificate number: 14734/C2 BV

File number: MAT 1543

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*

**ThyssenKrupp Steel Europe AG**  
Duisburg - GERMANY

*for the type of product*

### FERRITIC STEEL ROLLED PRODUCTS FOR LOW TEMPERATURE APPLICATIONS

Hot rolled plates in steel grades 5,0 Ni, 9,0 Ni, X12Ni5, X7Ni9, X8Ni9 (EN 10028-4) and (S)A-553 Type 1/(S)A553M Type 1

#### 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: 23 Aug 2020**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 18 Apr 2018,

Jens Bauermeister



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 in Ni alloy steels for low temperature applications.

Steel grade	Deoxydation practice & Refining	Delivery conditions
5,0 Ni X12Ni5 (EN 10028-4)	Killed and fine grain treated with Al	Direct Quenched and Tempered (QT) with maximum thickness 30mm
5,0 Ni X12Ni5 (EN 10028-4)	Killed and fine grain treated with Al	Quenched and Tempered (QT) with thickness range from 30mm to 50mm
9,0 Ni X7Ni9 (EN 10028-4) X8Ni9 (EN 10028-4) (S)A-553 Type 1 /(S)A553M Type 1	Killed and fine grain treated with Al	Quenched and Tempered (QT) with thickness up to 50mm

Steelmaking by Basic Oxygen Converter; Continuous casting; Plates made by hot rolling.

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

As per following documents issued by ThyssenKrupp Steel Europe AG:

- Documentation dated 14 April 2005 and 10 August 2005.
- Manufacturing data given in report No.262 dated August 2015.
- Report No. 278 dated March 2018.

### **3. TEST REPORTS**

As per following documents issued by ThyssenKrupp Steel Europe AG:

- Report No.FQP-PV 96/97 03 dated November 1996,
- Report No.178E dated 05 September 2000,
- Report No.213dated March 2005.
- Report No.262 and Report No.264 dated August 2015.

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

As per Bureau Veritas Rules for Classification.

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

The steel plates are to be supplied by ThyssenKrupp Steel Europe AG 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 from No.14734/A0 BV to No.14734/C1 BV.

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