



Marine & Offshore

Certificate number: 09001/E0 BV

File number: MAT 1543/01

Product code: 9006I

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

NORMAL STRENGTH HULL STEEL ROLLED PRODUCTS

Hot rolled plates, strip and plates from strip in steel grades A, B, D and E

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 is a renewal of certificate N° 09001/D0 BV expiring on 09/11/2019

This certificate will expire on: 09 Nov 2024

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 08 Nov 2019,

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. 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, strips and plates from strip manufactured at Thyssenkrupp Steel (Duisburg) works.

Product	Steel grade	Deoxydation practice & Refining	Delivery conditions
Plates	A - B	Killed and fine grain treated with Al	As Rolled (AR) up to 120mm Normalised (N) up to 120mm Normalizing Rolled (NR) up to 120mm
	D	Killed and fine grain treated with Al	As Rolled (AR) up to 35mm Normalised (N) up to 120mm Normalizing Rolled (NR) up to 120mm
	E	Killed and fine grain treated with Al	Normalised (N) up to 120mm Normalizing Rolled (NR) up to 120mm
Strips and plates from strips	A - B - D	Killed and fine grain treated with Al	As Rolled (AR) up to 12.5mm Normalised (N) up to 25mm Normalizing Rolled (NR) up to 25mm
	E	Killed and fine grain treated with Al	Normalised (N) up to 12.5mm Normalizing Rolled (NR) up to 12.5mm

Steelmaking by basic oxygen converter. Continuous casting or ingot casting.
Slabs supplied by Beeckerwerth, Bruckhausen and HKM steel works.

2. DOCUMENTS AND DRAWINGS :

"Manufacturer declaration concerning the production of hot rolled flat products from normal strength hull structural steels (plates/strip/plates from strip)" issued by Thyssenkrupp Steel and dated 20/03/2019.

3. TEST REPORTS :

- "TKS-PCG Evidence of production competence - Normal and higher strength hull structural steel" issued by Thyssenkrupp Steel and dated April 2008.
- "Report QS/A2" issued by Thyssenkrupp Steel AG and dated 04/05/1998.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The steel products are to be supplied by Thyssenkrupp Steel Europe AG 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 Rules for Classification.

7. OTHERS :

This certificate replaces approvals from No.09001/A0 BV to No.09001/D0 BV.

*** END OF CERTIFICATE ***