



Certificate number: 09900/C2 BV
File number: MAT 1543/03
Product code: 9010I

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

PLATES FOR BOILERS AND PRESSURE VESSELS

Hot rolled plates in steel grades P265GH, 16Mo3, 10CrMo9-10,
P355 qualities N, NH, NL1 and NL2 and
P460 in qualities NH, NL1 and NL2

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: 23 Aug 2015

For BUREAU VERITAS,
At BV HAMBURG, on 12 Apr 2011,
Udo Storm

A handwritten signature in black ink, appearing to read 'U. 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 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 :

Hot Rolled Plates for Boilers and Pressure Vessels

Steel grade	Deoxydation practice & Refining	Delivery conditions
P265GH	Killed and fine grain treated with Al	Normalised (N) with maximum thickness 120mm
P355N, P355NH P355NL1, P355NL2	Killed and fine grain treated with Al	Normalised (N) with maximum thickness 120mm
P460NH, P460NL1, P460NL2	Killed and fine grain treated with Al	Normalised (N) with maximum thickness 100mm
16Mo3	Killed and fine grain treated with Al	Normalised (N) with maximum thickness 40mm
10CrMo9-10	Killed and fine grain treated with Al	Normalised and Tempered (N+T) or Quenched and Tempered (Q+T) with maximum thickness 100mm

Steelmaking by Oxygen Converter Process.

Plates rolled at Duisburg-Süd plant and MRM Mülheim plant from continuous cast slabs supplied by Beeckerwerth and HKM Steel Plants.

2. DOCUMENTS AND DRAWINGS :

Steel grades P265GH, 16Mo3 and 10CrMo9-10 are according to EN10028-2.

Steel grades P355N, P355NH, P355NL1, P355NL2, P460NH, P460NL1 and P460NL2 are according to EN10028-3.

3. TEST REPORTS :

- "Qualification Test FG39T mod. BV" issued by ThyssenKrupp Stahl and dated January 1984.

- "Evidence of the reliability of production of plates from steels for pressure vessels P265GH, 16Mo3 and P355NH, NL1, NL2 in accordance with DIN EN 10028-2 and 3 in thickness range 6mm<t<120mm" issued by Thyssen Krupp Steel Europe AG and dated January 2009.

- "Evidence of the reliability of production process steels for pressure vessels 10CrMo9-10 acc. DIN EN 10028-2 and P460NH; NL1; NL2 acc. DIN EN 10028-3" issued by Thyssen Krupp Steel Europe AG and dated October 2010.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

The steel plates are to be manufactured, examined and tested by ThyssenKrupp Steel Europe AG in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

Arrangements shall be made for a Society's Surveyor to attend the relevant tests and examinations at manufacturer's works or to perform the relevant audits when an alternative survey scheme (BV Mode I) has been agreed. Relevant Bureau Veritas certificate will be issued after satisfactory completion of the procedure.

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

This certificate cancels and replaces approval number 09900/A0 BV dated 06 October 2000, 09900/B0 BV dated 14 September 2005, 09900/C0 dated 23 August 2010 and 09900/C1 dated 08/02/2011.

*** END OF CERTIFICATE ***