



Marine & Offshore

Certificate number: 29588/B0 BV

File number: MAT 52835-2012

Product code: 9007I

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

Public Joint Stock Company Magnitogorsk Iron & Steel Works
MAGNITOGORSK - RUSSIAN FEDERATION

for the type of product

HIGHER STRENGTH HULL STEEL ROLLED PRODUCTS

Hot rolled plates in steel grades AH32 to EH40 including Z25/Z35 grades.

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° 29588/A1 BV expiring on 18/09/2017

This certificate will expire on: 18 Sep 2022

For Bureau Veritas Marine & Offshore,
At BV ST PETERSBURG, on 26 Jun 2017,
Valery Azovtsev



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.

Steel Grade	Deoxydation practice & Refining	Delivery conditions
AH32-DH32 AH36-DH36 (Z25/Z35)	Killed and Fine grain treated with Al+Nb+Ti+V	Thermo-Mechanical rolling (TMCP) with thickness up to 65mm
EH32-EH36 (Z25/Z35)	Killed and Fine grain treated with Al+Nb+Ti+V	Thermo-Mechanical rolling (TMCP) with thickness up to 50mm
AH40-DH40-EH40 (Z25/Z35)	Killed and Fine grain treated with Al+Nb+Ti+V	Thermo-Mechanical rolling (TMCP) with thickness up to 50mm

Steelmaking by Basic Oxygen Furnace. Continuous casting.

2. DOCUMENTS AND DRAWINGS :

As per following documents issued by Magnitogorsk Iron & Steel Works:

- General Information and manufacturing datas (Process Flow, Quality Control, Alloying Practice, Rolling Process) submitted 2012.
- "Procedure of Automated Ultrasonic Inspection of Steel Plates with Testing Machine HP-B2/L2-TR3 by NDT Systems & Services" dated 16 November 2011.
- Rolled stock certificates for steel plates A40 and E40, 20mm and 50mm dated 2011.

3. TEST REPORTS :

As per following documents issued by Magnitogorsk Iron & Steel Works

- "Report on Certification Tests of Flat Products, 5000 MM Plate Mill, OJSC MMK, to determine compliance with Rules of Bureau Veritas" dated July 2012.
- "Technical report : Testing of steel plates A40Z35, E40Z35 produced by plate mill 5000 at OJSC MMK" dated 23 December 2013.
- Ultrasonic Inspection records submitted 2014.
- Certification test reports N° 41 and 42 dated 11 February 2014.

As per following documents issued by Promtest KM Accredited Testing Laboratory

- "Technical Report, Determination of welding properties of flat products (in thickness 65 mm, steel grade DH36Z25 manufactured by OJSC MMK) according to the program of classification society Bureau Veritas" dated 2012.
- "Technical report : Determination of Nil Ductility Transition Temperature and Weldability of 20mm and 50mm plates of steel grades A40Z35 and E40Z35" dated 2013.

As per following document issued by Public Joint Stock Company Magnitogorsk Iron & Steel Works

- "MMK Steel Mill 5000 Statistical datas for approval certificates renewal 2017" dated 08 June 2017.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

The steel plates are to be supplied by Public Joint Stock Company Magnitogorsk Iron and Steel Works 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.

In addition to the material grade designation, products are to be marked with the symbol Z25/Z35 as appropriate.

7. OTHERS :

This certificate replaces approvals N° 29588/A0 BV and 29588/A1 BV.

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