



Marine & Offshore

Certificate number: 08457/E0 BV

File number: MAT 2569/01

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

PJSC AZOVSTAL IRON & STEEL WORKS

Mariupol - UKRAINE

for the type of product

NORMAL STRENGTH HULL STEEL ROLLED PRODUCTS

Hot rolled plates in steel grade 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 will expire on: 05 Oct 2025

For Bureau Veritas Marine & Offshore,

At BV ODESSA, on 05 Oct 2020,

Yevgen KUZNETSOV



THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Hot rolled plates.

Steel grade	Deoxydation practice & Refining	Delivery conditions
A	Si-Al Killed	As Rolled (AR) with thickness up to 50mm
	Si-Al Killed and Al fine grain treated	Normalised (N) with thickness up to 90mm Normalising Rolled (NR) with thickness up to 50mm
B	Si-Al Killed	As Rolled (AR) with thickness up to 25mm
	Si-Al Killed and Al fine grain treated	Normalised (N) with thickness up to 90mm Normalising Rolled (NR) with thickness up to 50mm
D	Si-Al Killed and Al fine grain treated	Normalised (N) with thickness up to 90mm Normalising Rolled (NR) with thickness from up to 40mm
E	Si-Al Killed and Al fine grain treated	Normalised (N) with thickness up to 90mm

Steelmaking by basic oxygen converter and Continuous Casting. Plates hot rolled from continuous cast slabs with reduction ratio above 5:1 for plates with thickness below 50mm and above 3.3:1 for plates in thickness range 50mm to 90mm.

2. DOCUMENTS AND DRAWINGS :

As per following documents issued by PJSC Azovstal Iron & Steel works:

- "Technical assessment report for steel mill approval under BV Mode II survey scheme" dated 2010.
- "Technical report for compliance with the approval terms for manufacture of shipbuilding quality steel plates at AZOVSTAL" dated 2010.
- "Technical report on extension for shipbuilding steel rolled plate production as controlled rolled delivery in accordance with the rules of Bureau Veritas" Edition No.1 dated 07/02/2015.

3. TEST REPORTS :

As per following documents issued by PJSC Azovstal Iron & Steel works:

- "Report for Bureau Veritas on certification of steel plates, Grades BVA, BVB, BVD, BVA32, BVD32, BVA36, BVD36 in delivery condition normalizing rolling" dated 03/11/1998.
- "Technical report on compliance of hull shipbuilding steel production at AZOVSTAL works to BUREAU VERITAS approval conditions" dated 19/05/1999.
- "Tests results" transmitted by BV Mariupol mail 226-00 BV MRP dated 07/09/2000.
- "Technical report for compliance with the approval terms for manufacture of shipbuilding quality steel plates at AZOVSTAL" dated 2010.
- "Approval tests report for extent of normalizing rolled steels thickness according to Bureau Veritas Rules NR 480" Edition No.1 dated 07/02/2015.
- "Assesment of survey results during period 2015-2020" dated September 2020.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The steel plate are to be supplied by PJSC Azovstal Iron & Steel works 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 No.AC/UKR-01-01-247, and from No.08457/A0 BV to No.08457/D0 BV.

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