

CERTIFICATE NUMBER STML-T1788471

ISSUING OFFICE London Ship Eng - Materials

CERTIFICATE OF STEEL MILLS FACILITY AND PROCESS APPROVAL

This is to certify that a representative of ABS did, at the request of

PJSC ILYICH IRON AND STEEL WORKS OF MARIUPOL

1 LEVCHENKO STR., MARIUPOL, Ukraine, 87504

attend its facilities as indicated in the ABS City Kiev Port (UAH) port office survey report number 3549554 dated 12 November 2018 in order to carry out a survey of the facilities and associated quality procedures. The facility is considered capable of manufacturing

Plate and Semi-finished product components for marine applications

in accordance with the ABS Approval letter (Reference T1788471), ABS Rules, designated standards and ABS approved drawings. The approval is valid till 25 December 2023 subject to adherence to relevant ABS Rules and Survey requirements.

PIGNAL CHILL

Marcus Cridland Chief Metallurgist, ABS

ISSUE DATE: 12 November 2018 EXPIRY DATE: 25 December 2023

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NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS still result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-AS/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

AB258(0110)



Task - T1788471 Steel Mill Approval - Renewal Certificate No. STML-T1788471

Attention: Mr. Mr. K. Pismarev, PJSC ILYICH IRON AND STEEL WORKS OF MARIUPOL (WCN 367179)

The documents shown in the attached list are reviewed or filed for reference in accordance with the applicable requirements of the following and the facility is considered approved to manufacture products for hull application as outlined in the process/product approval.

1. ABS Rules for Materials and Welding Part 2 (2018)

Please note it is the responsibility of the facility to inform ABS of any changes to the manufacturing parameters and request renewal of approval prior to the five year expiry date.

For any clarifications, contact Nikos Vrellos at +44 207 377 4499, nvrellos@eagle.org.

Very truly yours,

Wei-Biao (Bill) Shi Vice President

Electronically Signed by: Satya Meruva



Documents List

| Drawing No. | Rev. No. | Title | Status | |
|-----------------------|-------------|-------------------------|------------------------------------|--|
| Fee Agreed | - | Cost agreement | Filed by ABS for Reference Only | |
| Client Declaration | - | Confirmation no Changes | Reviewed | |
| ISO 9001- 2015_en | - | QA Certificate | Filed by ABS for Reference Only | |
| certificates Iliych | - | Material Certificates | Filed by ABS for Reference Only | |

Electronic copies of the documents, appropriately stamped are available through the ABS Eagle Construct Engineering Manager (O2E), Web portal.

Process/Product Approval

| Product | Grade | Thickness | Fine Grain Practice | Casting Practice | Delivery condition |
|---------|--------------------------------|-----------|---------------------------------|---------------------|---------------------------|
| Plate | ABS - AH*/DH*/EH 32*/36 Z35 | 52 mm | (Al+Ti+Nb)/ (Al+Ti+Nb+ V) | CC | TMCP |
| Plate | ABS - A*/B*/D*/E Z35 | 52 mm | (Al+Ti) | CC | TMCP |
| Plate | ABS - A*/B*/D Z35 | 52 mm | Al | CC | Control Rolled (CR) |
| Plate | ABS - A*/B | 52 mm | Al | CC | As rolled (AR) |
| Slab | ABS - A*/B | 150 mm | Al | CC | TMCP |
| Slab | ABS - A*/B*/D Z35 | 200 mm | Al | CC | TMCP |
| Slab | ABS - A*/B*/D*/E Z35 | 250 mm | (Al+Ti) | CC | TMCP |
| Slab | ABS - AH*/DH*/EH 32*/36 Z35 | 250 mm | (Al+Ti+Nb)/ (Al+Ti+Nb+ V) | CC | TMCP |

Steel Making Practice: BOF **Deoxidation Practice**: Si

Heat treatment Facility: In-house

^{*} Approval of these grades is based on qualification tests carried out on the higher grade.