

Approval Certificate for Manufacturing Process

[Rolled Steels]



Initial Approval 23 January 2009

Manufacturer AG der Dillinger Huttenwerke
Werkstrasse 1, D-66763 Dillingen, Germany

Product Description Rolled Steel Plates for Hull Structures
High Strength Steel Plates for Welded Structures
High Strength Fine Grained Structural Steel Plates

* See Appendix 1

Approval Condition Individual Product Certification is required.

THIS IS TO CERTIFY that the manufacturing process for the above mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and/or of the recognized standards as follows.

Pt 2, Ch 1, Sec 3 of the Rules for Classification of Steel Ships

This Certificate is valid until 22 January 2029

Issued at Busan, Korea on 23 January 2024



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME24004528209) and certificate No.(HMB24377-SP001).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

Note :

1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 23 January 2024

A. Rolled Steel Plates for Hull Structures

Grade	Z-quality	Steel making	Deoxidation	Grain Refining Elements	Thickness Max. (mm)	Heat Treatment
AH/DH/EH32	-	BOC, CC	Killed	Al+Nb	100	TMCP (TM)
AH/DH/EH36	-	BOC, CC	Killed	Al+Nb+Ti	100	TMCP (TM)

B. High Strength Steel Plates for Welded Structures

Grade	Z-quality	Steel making	Deoxidation	Grain Refining Elements	Thickness Max. (mm)	Heat Treatment
AH/DH/EH70(1)	Z25/Z35	BOC, IC/CC(2)	Killed	Al+Nb	178	QT

- (1) Mechanical properties for plate thickness > 150 mm as for thickness 150 mm.
- (1) Ni ≤ 2.60% of ladle analysis.
- (1) Welding heat input ≤ 3.0 kJ/mm.
- (2) Thickness ≤ 120 mm for CC.

C. High Strength Fine Grained Structural Steel Plates

Grade	Z-quality	Steel making	Deoxidation	Grain Refining Elements	Thickness Max. (mm)	Heat Treatment
DILLIMAX690B/T(1)	Z15/Z25/Z35	BOC, IC/CC	Killed	Al+Nb, Al+Nb+Ti	178	QT

- (1) Acc. to the manufacturer's material data sheet, edition April 2020.

※ Abbreviations

- BOC : Basic Oxygen Converter
- CC : Continuous Casting
- IC : Ingot Casting
- QT : Quenched and Tempered
- TMCP : Thermo-Mechanical Controlled Processing

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