

Approval Certificate for Manufacturing Process

[Semi-Finished Products, Forgings, Bars, Tubes and Pipes]



Initial Approval 15 December 1978

Manufacturer SeAH Changwon Integrated Special Steel Corp.
147, Jeokhyeon-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea

Product Description Semi-Finished Products
Steel Forgings
Steel Bars
Round Bars for Chain
Steel Tubes for Boilers and Heat Exchangers
Steel Pipes for Pressure Piping
Austenitic Stainless Steel Pipes
Duplex Stainless Steel Pipes

Approval Condition Individual Product Certification is required unless otherwise specifically exempted except semi-finished products.

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. 1, 3, 4 and 6 of the Rules for the Classification of Steel Ships

This Certificate is valid until 25 November 2024

Reissued at Busan, Korea on 1 November 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(ME24052093682) and certificate No.(CWN22610-SF001).



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 : 1 November 2024

A. Semi-Finished Products

Product forms	Type or grade	Steel making	Max.	Supply condition
Ingots	Carbon steel Alloy steel Stainless steel	EAF, IC	200 000 kg	As casted
Billets	A	EAF, IC or CC	220 mm x 220 mm	As rolled

B. Steel Forgings

Type	Steel making	Forging process	Forging weight
Carbon steel	EAF, IC	Open die forging	Max. 120 000 kg
Alloy steel	EAF, IC	Open die forging	Max. 30 000 kg

C. Steel Bars

Type	Steel making	Manufacturing process	Diameter
Carbon steel Alloy steel	EAF, IC or CC	Rolling or radial forging	Max. 350 mm
Austenitic stainless steel	EAF, IC or CC	Rolling or radial forging	Max. 320 mm
Austenitic stainless steel	EAF, IC	Open die forging	Max. 500 mm
Age-hardening stainless steel	EAF, IC or CC	Rolling or radial forging	Max. 220 mm

D. Round Bars for Chain

Grade	Steel making	Diameter	Supply condition
Up to RSBC 70 or equivalent	EAF, CC	Max. 65 mm	As rolled

E. Tubes and Pipes

Type	Steel making	Manufacturing process	Dimension (OD x WT)
Carbon steel Alloy steel Austenitic stainless steel	EAF, CC	Hot/cold finished seamless	Max. 273.1 mm x 30 mm
Duplex stainless steel	EAF, CC	Hot/cold finished seamless	Max. 114.3 mm 11.07 mm

※ Abbreviations

EAF : Electric arc furnace
IC : Ingot casting
CC : Continuous casting

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