



Marine &amp; Offshore

Certificate number: 22083/C0 BV

File number: MAT 11240 - 2009

Product code: 8999H

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

**SeAH Besteel Corporation**  
Jeollabuk-do - KOREA (REPUBLIC OF)

for the type of product

**SEMI-FINISHED PRODUCTS**

Ingots, blooms and billets for forged and rolled products in C-Mn and alloy steels.

**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: 30 Aug 2024**

For Bureau Veritas Marine & Offshore,  
At BV PUSAN, on 30 Aug 2019,  
Chang-uk HONG



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](http://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.

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BV Mod. Ad.E 1533 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

Semi-finished products for forged and rolled products.

Type of steel	Type of product	Application	Delivery condition
C-Mn steel	Ingot	Forged products	Killed and Refined with maximum weight 155.8T
	Bloom	Rolled products	Killed and Refined with maximum dimension 390x510mm
	Billet	Rolled products	Killed and Refined with maximum dimension 260x400mm
Alloy steel	Ingot	Forged products	Killed and Refined with maximum weight 155.8T
	Bloom	Rolled products	Killed and Refined with maximum dimension 390x510mm
	Billet	Rolled products	Killed and Refined with maximum dimension 260x400mm

Steelmaking in Electric Arc Furnace and Vacuum Degassing (ingots) or RH treatment (blooms and billets).  
Continuous Casting for blooms and billets.

### 2. DOCUMENTS AND DRAWINGS :

As per following documentation issued by SeAH Besteel Corporation:

- "Report of works approval test" dated 26 March 2009.
- "Report of works approval test" dated 17 September 2010.
- "Technical documents" dated 11 July 2019.

### 3. TEST REPORTS :

3.1 As per following documentation issued by SeAH Besteel Corporation:

- "Report of works approval test" dated 26 March 2009.
- "Report of works approval test" dated 17 September 2010.
- "Application for extention approval Alloy steel" dated 11 April 2014.

3.2 Typical tested grades are:

- S20C and S45C according to JIS G 4051 for C and C-Mn steels.
- SCM440 and SNCM439 according to JIS G 4053 for alloy steels.

### 4. APPLICATION / LIMITATION :

Chemical composition, tensile properties, and Charpy-V notch test requirements are to be as per Bureau Veritas Rules NR216 and/or alternative specification mentioned on reviewed drawings as applicable.

### 5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The semi-finished products are to be supplied by SeAH Besteel Corporation in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - SeAH Besteel Corporation has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, SeAH Besteel Corporation has declared to Bureau Veritas the following production site(s):

**SeAH Besteel Corporation**  
522, Oehang-ro, Gunsan-si  
Jeollabuk-do 573-711 , Korea

### 6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

### 7. OTHERS :

This certificate replaces approvals No.22083/A0 BV to No.22083/B1 BV.

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