



APPROVAL CERTIFICATE FOR MANUFACTURING PROCESS

Certificate No. : SHI18031-SP002 **Initial Approval** : 9th October, 2007.
Product : Rolled Steels
Manufacturer : Jiangsu Shagang Group Co., Ltd.
Jinfeng Town, Zhangjiagang City, Jiansu Province 215625, China

Product Description : Rolled Steel Plates for Hull Structures

- Grade : A(Z), B(Z), D(Z), E(Z)
AH32(Z), DH32(Z), EH32(Z), FH32(Z)
AH36(Z), DH36(Z), EH36(Z), FH36(Z)
AH40(Z), DH40(Z), EH40(Z), FH40(Z)
- Supply condition : 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 and entered in the "List of Approved Manufacturer and Type Approved Equipment".

Pt 2, Ch 1, Art 301 of the Rules for Classification of Steel Ships.

This Certificate is valid until 8th October, 2017.
Reissued at Shanghai, China on 14th November, 2013.



[Signature]
President of
CHINA KR Co., Ltd.

*Note :1 : The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.
2 : The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.*

Appendix 1

Product Description and/or Approval Condition

Certificate No : SHI18031-SP002

Date of Issue : 14th November, 2013.

© Product Description

- 1) Steel Making : Basic Oxygen Converter
- 2) Deoxidation : killed
- 3) Casting Method : Continuous Casting
- 4) No. 1 & 2 Plate Rolling Workshop

Grade	Z-quality	Grain Refining	Thickness Max. (mm)	Supply Condition(1)
A, B, D, E	Z25/Z35	Al	40	AR
A, B	Z25/Z35	Al	60	CR (NR)
D, E	Z25/Z35	Al	60	TMCP
A, B	Z25/Z35	Al+Ti	100	N
D, E	Z25/Z35	Al+Nb+Ti	100	N
AH32, AH36	-	Al+Ti	30	AR
AH32, DH32	Z25/Z35	Al+Ti Al+Nb+Ti	40 60	CR (NR) TMCP (AR)
EH32, FH32	Z25/Z35	Al+Nb+Ti	60	TMCP
AH36, DH36	Z25/Z35	Al+Nb+Ti	40 60	CR (NR) TMCP
EH36, FH36	Z25/Z35	Al+Nb+Ti	60	TMCP
AH40, DH40 EH40, FH40	Z25/Z35	Al+Nb+Ti+V	60	TMCP
AH32, DH32 EH32, FH32	Z25/Z35	Al+Nb+Ti	100	N
AH36, DH36 EH36, EH36 AH40, DH40 EH40, EH40	Z25/Z35	Al+Nb+Ti+V	100	N

Remark

- (1) AR : As Rolling
 CR (NR) : Controlled Rolling (Normalizing Rolling)
 TMCP : Thermo-Mechanical Controlled Processing
 N : Normalized condition < The End >



APPROVAL CERTIFICATE FOR MANUFACTURING PROCESS

Certificate No. : SHI18031-SP003 **Initial Approval** : 24th September, 2013.
Product : Rolled Steels
Manufacturer : Jiangsu Shagang Group Co., Ltd.
Jinfeng Town, Zhangjiagang City, Jiansu Province 215625, China

Product Description : High Strength Quenched and Tempered Steels for Welded Structures

- Grade	: AH43 (Z), DH43 (Z), EH43 (Z), FH43 (Z) AH47 (Z), DH47 (Z), EH47 (Z), FH47 (Z) AH51 (Z), DH51 (Z), EH51 (Z), FH51 (Z) AH56 (Z), DH56 (Z), EH56 (Z), FH56 (Z) AH63 (Z), DH63 (Z), EH63 (Z), FH63 (Z) AH70 (Z), DH70 (Z), EH70 (Z), FH70 (Z)
- Steel making	: Basic Oxygen Converter
- Casting process	: Continuous Casting
- Grain refining	: Al+Nb+Ti
- Thickness	: Max. 100 mm
- Supply condition	: Quenched and Tempered

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 and entered in the "List of Approved Manufacturer and Type Approved Equipment".

Pt 2, Ch 1, Art 308 of the Rules for Classification of Steel Ships.

This Certificate is valid until 23rd September, 2018.

Issued at Shanghai, China on 24th September, 2013.



KOREAN REGISTER OF SHIPPING

[Signature]
President of
CHINA KR Co., Ltd.

Note : 1 : The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.

2 : The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.