

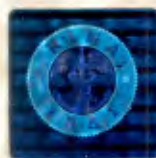


**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF
MATERIALS**
No. FAB113117WS/001

This is to certify that the manufacture of the product identified below is in compliance with the applicable requirements of the RINA Rules for the Approval of Manufacturers of Materials.

<i>Description</i>	Normal strength and higher strength hull steel plates
<i>Type</i>	A-B-D-E-AH32-AH36-AH40-DH32-DH36-DH40-EH32-EH36-E H40-E47
<i>Manufacturer</i>	HUNAN VALIN XIANGTAN IRON AND STEEL CO. LTD.
<i>Place of manufacture</i>	YUETANG STREET, YUETANG DISTRICT 411101 Xiangtan CHINA
<i>Reference standards</i>	RINA Rules for the approval of manufacturers of materials

Issued in **SHANGHAI** on **September 6, 2017**. *This Certificate is valid until* **September 1, 2022**



 **RINA**
Gu Hong
RINA Services S.p.A.
Hong Gu

This certificate consists of this page and 1 enclosure





**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF
MATERIALS
No. FAB113117WS/002**

This is to certify that the manufacture of the product identified below is in compliance with the applicable requirements of the RINA Rules for the Approval of Manufacturers of Materials.

<i>Description</i>	Normal strength and higher strength hull steel plates
<i>Type</i>	A-B-D-E-AH32-AH36-AH40-DH32-DH36-DH40-EH32-EH36-EH40-FH32-FH36-FH40
<i>Manufacturer</i>	HUNAN VALIN XIANGTAN IRON AND STEEL CO. LTD.
<i>Place of manufacture</i>	YUETANG STREET, YUETANG DISTRICT 411101 Xiangtan CHINA
<i>Reference standards</i>	RINA Rules for the approval of manufacturers of materials

Issued in **SHANGHAI** on **September 6, 2017**. *This Certificate is valid until* **September 1, 2022**



RINA Services S.p.A.
Hong Gu

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CERTIFICATE OF APPROVAL OF MANUFACTURERS OF MATERIALS
No. FAB113117WS/002
Enclosure - Page 1 of 1
A-B-D-E-AH32-AH36-AH40-DH32-DH36-DH40-EH32-EH36- EH40-FH32-FH36-FH40

APPROVAL CONDITIONS
For N. 1 & N. 2 Line of 3.8M Wide and Heavy Plate Plant

- For N. 1 Line:

Particulars of the approval:

Grades	Steelmaking ¹⁾	Deoxidation	Fine grain elements	Delivery condition ²⁾	Max. thickness (mm)	Z-quality
A, B	BOC+CC	killed	Al	CR	40	Z25/Z35
			Al+Nb	N	60	
D	BOC+CC	killed	Al	CR	40	Z25/Z35
			Al	TMCP	40	
			Al+Nb	N	60	
E	BOC+CC	killed	Al+Nb	N	60	Z25/Z35
AH32, DH32	BOC+CC	killed	Al	CR	40	Z25/Z35
			Al	TMCP	40	
			Al+Nb+Ti	N	100	
EH32	BOC+CC	killed	Al+Nb+Ti	N	100	Z25/Z35
AH36, DH36,			Al	CR	40	Z25/Z35
			Al+Nb+Ti	TMCP	40	
			Al+Nb+Ti	N	100	
EH36	BOC+CC	killed	Al+Nb+Ti	TMCP	40	Z25/Z35
			Al+Nb+Ti	N	100	
FH36	BOC+CC	killed	Al+Nb+Ti	TMCP	40	Z25/Z35
AH40, DH40, EH40, FH40	BOC+CC	killed	Al+Nb+Ti	TMCP	40	Z25/Z35

- For N. 2 Line:

Grades	Steelmaking	Deoxidation	Fine grain elements	Delivery condition ²⁾	Max. thickness (mm)	Z-quality
A, B	BOC+CC	killed	Al	CR	40	Z25/Z35
D	BOC+CC	killed	Al	CR	40	Z25/Z35
			Al	TMCP	40	
AH32, DH32, EH32, AH36, DH36, EH36	BOC+CC	killed	Al+Nb	TMCP	40	Z25/Z35

Remarks:

- 1) BOC: Basic Oxygen Converter, CC: Continuous Casting;
- 2) CR: controlled rolling; N: Normalising; TM: Thermo-Mechanical controlled processing;

Survey conditions:

The plates are to be in compliance in all respects with the relevant RINA Rules and are to be tested accordingly.

Note: This certificate supersedes and covers the previous Certificate No.: FAB109015WS issued on 11th Aug 2015 by this Class Society

General conditions for the approval

- The approval is granted on condition that the RINA Rules for the approval, manufacture, testing and certification of materials are complied with in all respects.
- RINA is to be notified of any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate.



SHANGHAI September 6, 2017

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