



**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF
MATERIALS**
No. FAB027611WS/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 Type</i>	Normal strength and higher strength hull steel plates A/B/D/E/AH32/DH32/EH32/FH32/AH36/DH36/EH36/FH36/AH40/DH40/EH40/FH40
<i>Manufacturer Place of manufacture</i>	HEAVY PLATE MILL OF MEDIUM AND HEAVY PLATE PLANT OF ANGANG STEEL CO., LTD HONGQI ROAD, LINGSHAN, LISHAN DISTRICT ANSHAN CHINA
<i>Reference standards</i>	RINA Rules for the approval of manufacturers of materials

Issued in **SHANGHAI** on **June 9, 2011.** This Certificate is valid until **February 17, 2016**



This certificate consists of this page and 1 enclosure

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A/B/D/E/AH32/DH32/EH32/FH32/AH36/DH36/EH36/FH36/AH40/DH40/EH40/FH40

APPROVAL CONDITIONS

Particulars of the approval:

Grade	Steel making	Fine grain treatment	Delivery condition	Max. thickness(mm)	Z-quality
A	BOC, CC	Al	AR	40	-
		-	AR	40	-
		Al	TMCP	100	Z35
B	BOC, CC	Al	AR	40	-
		Al	N	40	-
		Al	TMCP	100	Z35
D	BOC, CC	Al	CR	40	-
		Al	N	40	-
		Al+Nb	CR	40	-
		Al+Nb	N	40	-
		Al	TMCP	100	Z35
E	BOC, CC	Al	N	40	-
		Al	TMCP	100	Z35
AH32	BOC, CC	Al+Nb+V	CR	40	-
		Al+Nb+V	N	40	-
		Al	CR	40	-
		Al	N	40	-
		Al+V+Nb+Ti	TMCP	100	Z35
DH32	BOC, CC	Al+Nb+V	CR	40	-
		Al+Nb+V	N	40	-
		Al+V+Nb+Ti	TMCP	100	Z35
AH36,DH36	BOC, CC	Al+Nb+V	N	40	-
		Al+Nb+V	CR	40	-
		Al+V+Nb+Ti	TMCP	100	Z35
EH32,EH36	BOC,CC	Al+Nb+V	N	40	-
		Al+V+Nb+Ti	TMCP	100	Z35
AH40,DH40,FH32, FH36,FH40	BOC,CC	Al+V+Nb+Ti	TMCP	100	Z35

Remarks:

BOC: Basic oxygen converter CC: Continuous casting

AR: As rolled CR: Control rolling N: Normalizing TMCP: Thermo-mechanical controlled processing

RINA
Via Corsica, 12 - 16128 Genova
Tel +39 010 53851
Fax +39 010 5351000



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 9, 2011



**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF
MATERIALS**
No. **FAB027611WS/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>	High strength rolled steel products for welded structures
<i>Type</i>	A420/D420/E420/F420/A460/D460/E460/F460/A500/D500/E500/F500/A550/D550/E550/F550
<i>Manufacturer</i>	HEAVY PLATE MILL OF MEDIUM AND HEAVY PLATE
<i>Place of manufacture</i>	PLANT OF ANGANG STEEL CO., LTD HONGQI ROAD, LINGSHAN, LISHAN DISTRICT ANSHAN CHINA
<i>Reference standards</i>	RINA Rules for the approval of manufacturers of materials

Issued in **SHANGHAI** on **June 9, 2011.** *This Certificate is valid until* **February 17, 2016**



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A420/D420/E420/F420/A460/D460/E460/F460/A500/D500/E500/F500/A550/D550/E550/F550

APPROVAL CONDITIONS

Particulars of the approval:

Grade	Steel making	Fine grain treatment	Delivery condition	Max. thickness(mm)	Z-quality
A420,A460,A500,A550	BOC, CC	Al+Nb+Ti	TMCP	50	Z35
D420,D460,D500,D550	BOC, CC	Al+Nb+Ti	TMCP	50	Z35
E420,E460,E500,E550	BOC, CC	Al+Nb+Ti	TMCP	50	Z35
F420,F460,F500,F550	BOC, CC	Al+Nb+Ti	TMCP	50	Z35

Remarks:n

BOC: Basic oxygen converter CC: Continuous casting

TMCP: Thermo mechanically controlled rolling process

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.

 **RINA**
Gu Hong
SHANGHAI June 9, 2011