



13th August 2013

4300 Heavy Plate Mill of Angang Company Limited
Lingshan District
Anshan City, Liaoning Province
P.R.China

Refer to: Stephen Meesey/CYW
File Ref: S-6

Re: Plant Survey & Testing

Gentlemen:

A renewal survey of 4300 Heavy Plate Mill of Angang Company Limited, Anshan City, Liaoning Province, People's Republic of China, was conducted by an exclusive Surveyor to the American Bureau of Shipping on the 11th December 2012 and subsequent dates. Results of the survey indicated that the mill is capable of producing steel plates as listed on the attachment(s) in accordance with the Rules of this Bureau.

Therefore, 4300 Heavy Plate Mill of Angang Company Limited may produce the steel plates as listed in the attachment(s) in accordance with ABS Rules, including the witnessing of prescribed tests, provided the material in production is to the satisfaction of the attending Surveyor.

Please note that our plant survey carried out is for the product and process as listed in the attachment(s). When new or special steels or production methods are proposed, data in support of mechanical properties, weldability and compliance with ABS Rules are required by 2-1-2/3, 2-1-3/3 and 2-A4/3.1.2 of ABS Rules at which time another plant survey by an exclusive Surveyor will be required.

This approval letter is valid until 01st August, 2018.

Renewal of approval is subject to a plant audit and re-approval test as applicable as required by 2-A4/11 of ABS Rules not later than 01st August 2018.

This approval letter is used to replace or supersede all approval letter(s) previously issued (if any).

Very truly yours,

By

C.Y. Wong
Principal Surveyor



cc: ABS Americas - Houston, MMPT
cc: ABS Greater China - Shanghai

Reference Report No:DL2409041-A

Table 1

American Bureau of Shipping (China), Ltd.

Room 2204, Building A, ShangFangGangJing, No.4,WuWu Road, Zhongshan District,Dalian, China
Tel: 86-411-3998-9767/9768 Fax: 86-411-3998-9770 WEBSITE: www.eagle.org

Attachment A**Attachment to Approval letter Dated 13th August, 2013**

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Product	: Steel Plate
Grades	: A
Deoxidation Practice	: Si Killed
Fine-grain Practice	: --
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: As-Rolled (AR)
Maximum Thickness	: 40mm
Markings	: AB/A

Table 2

Product	: Steel Plate
Grades	: A*, B
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: Al Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: As-Rolled (AR)
Maximum Thickness	: 40mm
Markings	: AB/A, AB/B

Table 3

Product	: Steel Plate
Grades	: A*, B*, D
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: Al Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Control Rolled (CR)
Maximum Thickness	: 40mm
Markings	: AB/A, AB/B, AB/DN



Attachment A

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Table 4

Product	: Steel Plate
Grades	: E
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: Al Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Normalized (N)
Maximum Thickness	: 40mm
Markings	: AB/EN

Table 5

Product	: Steel Plate
Grades	: A*, B*, D*, E
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: Al Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Thermo-Mechanically Controlled Processing (TMCP)
Maximum Thickness	: 100mm
Markings	: AB/A, AB/B, AB/DN, AB/E, AB/A Z35, AB/B Z35, AB/DN Z35, AB/E Z35

Table 6

Product	: Steel Plate
Grades	: A-W100*, B-W100*, D-W100*, E-W100
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb+V) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Thermo-Mechanically Controlled Processing (TMCP)
Maximum Thickness	: 100mm
Markings	: AB/A-W100, AB/B-W100, AB/DN-W100, AB/E-W100, AB/A-W100 Z35, AB/B-W100 Z35, AB/DN-W100 Z35, AB/E-W100 Z35



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Table 7

Product	: Steel Plate
Grades	: AH32*, DH32*, AH36*, DH36
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Control Rolled (CR)
Maximum Thickness	: 30mm
Markings	: AB/AH32, AB/DH32N, AB/AH36, AB/DH36N

Table 8

Product	: Steel Plate
Grades	: AH32*, DH32*, AH36*, DH36
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb+V) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Control Rolled (CR)
Maximum Thickness	: 40mm
Markings	: AB/AH32, AB/DH32N, AB/AH36, AB/DH36N

Table 9

Product	: Steel Plate
Grades	: EH32*, EH36
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb+V) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Normalized (N)
Maximum Thickness	: 40mm
Markings	: AB/EH32N, AB/EH36N



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Table 10

Product	: Steel Plate
Grades	: AH32*, DH32*, EH32*, FH32*, AH36*, DH36*, EH36*, FH36*, AH40*, DH40*, EH40*, FH40
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb+V) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Thermo-Mechanically Controlled Processing (TMCP)
Maximum Thickness	: 100mm
Markings	: AB/AH32, AB/DH32N, AB/EH32, AB/FH32, AB/AH36, AB/DH36N, AB/EH36, AB/FH36, AB/AH40, AB/DH40N, AB/EH40, AB/FH40, AB/AH32 Z35, AB/DH32N Z35, AB/EH32 Z35, AB/FH32 Z35, AB/AH36 Z35, AB/DH36N Z35, AB/EH36 Z35, AB/FH36 Z35, AB/AH40 Z35, AB/DH40N Z35, AB/EH40 Z35, AB/FH40 Z35

Table 11

Product	: Steel Plate
Grades	: AH32-W100*, DH32-W100*, EH32-W100*, AH36-W100*, DH36-W100*, EH36-W100*, AH40-W100*, DH40-W100*, EH40-W100
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb+V) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Thermo-Mechanically Controlled Processing (TMCP)
Maximum Thickness	: 100mm
Markings	: AB/AH32-W100, AB/DH32N-W100, AB/EH32-W100, AB/AH36-W100, AB/DH36N-W100, AB/EH36-W100, AB/AH40-W100, AB/DH40N-W100, AB/EH40-W100, AB/AH32-W100 Z35, AB/DH32N-W100 Z35, AB/EH32-W100 Z35, AB/AH36-W100 Z35, AB/DH36N-W100 Z35, AB/EH36-W100 Z35, AB/AH40-W100 Z35, AB/DH40N-W100 Z35, AB/EH40-W100 Z35,

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Table 12

Product	: Steel Plate
Grades	: AQ43*, DQ43*, EQ43*, FQ43*, AQ47*, DQ47*, EQ47*, FQ47
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Thermo-Mechanically Controlled Processing (TMCP)
Maximum Thickness	: 100mm
Markings	: AB/AQ43, AB/DQ43, AB/EQ43, AB/FQ43, AB/AQ47, AB/DQ47, AB/EQ47, AB/FQ47, AB/AQ43 Z35, AB/DQ43 Z35, AB/EQ43 Z35, AB/FQ43 Z35, AB/AQ47 Z35, AB/DQ47 Z35, AB/EQ47 Z35, AB/FQ47 Z35,

Table 13

Product	: Steel Plate
Grades	: AQ51*, DQ51*, EQ51*, FQ51*, AQ56*, DQ56*, EQ56*, FQ56
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Thermo-Mechanically Controlled Processing (TMCP)
Maximum Thickness	: 80mm
Markings	: AB/AQ51, AB/DQ51, AB/EQ51, AB/FQ51, AB/AQ56, AB/DQ56, AB/EQ56, AB/FQ56, AB/AQ51 Z35, AB/DQ51 Z35, AB/EQ51 Z35, AB/FQ51 Z35, AB/AQ56 Z35, AB/DQ56 Z35, AB/EQ56 Z35, AB/FQ56 Z35,

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Table 14

Product	: Steel Plate
Grades	: AQ63*, DQ63*, EQ63*, FQ63*, AQ70*, DQ70*, EQ70*, FQ70
Deoxidation Practice	: Al-Si Killed
Fine-grain Practice	: (Al+Nb+V) Treated
Casting Practice	: Continuous Casting (CC)**
Rolling/Heat Treatment Practice	: Thermo-Mechanically Controlled Processing (TMCP)
Maximum Thickness	: 50mm
Markings	: AB/AQ63, AB/DQ63, AB/EQ63, AB/FQ63, AB/AQ70, AB/DQ70, AB/EQ70, AB/FQ70, AB/AQ63 Z35, AB/DQ63 Z35, AB/EQ63 Z35, AB/FQ63 Z35, AB/AQ70 Z35, AB/DQ70 Z35, AB/EQ70 Z35, AB/FQ70 Z35,

** Slab Source: Angang No.1, No.2 & No.3 Mills

NOTE: * The approval of asterisk (*) superscripted grades in each one of the above tables are based on qualification test data presented on non-asterisk superscripted grade in the same table, and hence, these derivative benefit grades are to be metallurgically equivalent (in terms of chemistry and processed identically) to the respective qualifying grade, in all aspects.


C.Y. Wong
Principal Surveyor
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