



中国船级社
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: W01.01-
HQ000120

工厂认可证书
CERTIFICATE OF WORKS APPROVAL

证书编号/Certificate No. FS15W00016

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。

This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products as described in the certificate.

制造厂/Manufacturer

DONGKUK STEEL MILL CO., LTD. (DANGJIN)

25, Godaegongdan 1-gil, Songak-Eup, Dangjin-Si, Chung Nam, Korea

认可产品/Product Approved

钢板

STEEL PLATE

高强度船体结构钢, 一般强度船体结构钢

Higher Strength Hull Structural Steel Plate, Normal Strength Hull Structural Steel Plate

认可标准/Approval Standard

1. 中国船级社《材料与焊接规范》(2012)及其修改通报第1篇第3章
Chapter 3, Part One of China Classification Society Rules for Materials and Welding 2012 and its Amendments

证书有效期至/ **This Certificate is valid until**

2019年7月19日 / Jul. 19, 2019

发证机构

中国船级社釜山分社

签发日期

2015年9月16日

Issued by

CCS Busan Branch

Date

Sep. 16, 2015

本证书根据中国船级社《钢质海船入级规范》及有关程序规定签发,关于证书的有关规定见本证书背面的说明。当本证书包括多页纸张时,则所有证书页为一个整体,必须同时使用。每一页证书均须由本社盖章方为有效。证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。本认可证书不代表本社对个体产品质量的检验。有关各方对所持证书的真实性有疑问时,可以向本社检验机构咨询。
This Certificate is issued pursuant to the Rules for Classification of Sea-going Steel Ships and related procedures of the Society. Refer to the back of the certificate for detailed requirements of the certificate. When the certificate consists of more than one page, all pages of the certificate are taken as a whole and are used simultaneously. No certificate page is valid without bearing the stamp of the Society and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. This approval certificate does not constitute the inspection of the Society about the quality of the unit/batch product. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices.

CCS
中国船级社



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N. FS8934810840

产品明细/ Product Description

高强度船体结构钢/Higher Strength Hull Structural Steel Plate
 钢级/Grade : See attached pages
 一般强度船体结构钢/Normal Strength Hull Structural Steel Plate
 钢级/Grade : See attached pages

批准的图纸和设计计算书/ Approved Drawings and Design Calculations

图纸批准号/ Drawings Approval No. : FS15W00016

产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No. : TEST REPORT (AS ROLLED)
 试验报告日期/Test Report Date : 2009-12-30
 试验单位/ Laboratory : DONGKUK STEEL CO., LTD. (DANGJIN WORKS)
 试验单位地址/ Test Address : 400, HANJIN-RI, SONGGAK-MYUN, DANGJIN-KUN, CHUUNG NAM, KOREA

试验报告编号/Test Report No. : TEST REPORT (CR/N)
 试验报告日期/Test Report Date : 2010-02-28
 试验单位/ Laboratory : DONGKUK STEEL CO., LTD. (DANGJIN WORKS)
 试验单位地址/ Test Address : 400, HANJIN-RI, SONGGAK-MYUN, DANGJIN-KUN, CHUUNG NAM, KOREA

试验报告编号/Test Report No. : TEST REPORT (TMCP)
 试验报告日期/Test Report Date : 2010-06-30
 试验单位/ Laboratory : DONGKUK STEEL CO., LTD. (DANGJIN WORKS)
 试验单位地址/ Test Address : 400, HANJIN-RI, SONGGAK-MYUN, DANGJIN-KUN, CHUUNG NAM, KOREA

试验报告编号/Test Report No. : TEST REPORT (NORMALIZING)
 试验报告日期/Test Report Date : 2010-09-10
 试验单位/ Laboratory : DONGKUK STEEL CO., LTD. (DANGJIN WORKS)
 试验单位地址/ Test Address : 400, HANJIN-RI, SONGGAK-MYUN, DANGJIN-KUN, CHUUNG NAM, KOREA

试验报告编号/Test Report No. : Approval Extension for N & TMCP
 试验报告日期/Test Report Date : 2011-10-18
 试验单位/ Laboratory : DONGKUK STEEL CO., LTD. (DANGJIN WORKS)
 试验单位地址/ Test Address : 400, HANJIN-RI, SONGGAK-MYUN, DANGJIN-KUN, CHUUNG NAM, KOREA

试验报告编号/Test Report No. : Approval Extension for Nor.D grade
 试验报告日期/Test Report Date : 2012-11-15
 试验单位/ Laboratory : DONGKUK STEEL CO., LTD. (DANGJIN WORKS)
 试验单位地址/ Test Address : 400, HANJIN-RI, SONGGAK-MYUN, DANGJIN-KUN, CHUUNG NAM, KOREA

试验报告编号/Test Report No. : Approval Extension for As-Rolled B Grade
 试验报告日期/Test Report Date : 2015-06-03
 试验单位/ Laboratory : DONGKUK STEEL MILL CO., LTD. (DANGJIN WORKS)
 试验单位地址/ Test Address : 25 Godaegongdan
 1-gil, Songak-eup, Dangjin-si, Chungcheongnam-do, Korea

产品适用范围/ Application of the Product

Nº 15359373



Hull Structure.

认可保持条件/ Maintenance Requirements of Approval

1. 工厂认可后, 如果图纸、技术文件、工艺规程有较大改变, 应征得本社同意。若改变涉及或影响到产品的设计、主要制造材料、关键工艺或产品的特性、特征, 则与特性有关的图纸和技术文件应经过本社审批, 并在检验机构认为必要时, 经本社检验人员到厂进行检查和见证有关试验, 其结果应能证实仍符合认可条件。

After works approval, if there are any major changes to the drawings, technical documents, specifications, prior consent should be obtained from the survey office of the Society. If the changes involve or affect product design, major construction materials, key workmanship or product characteristics and properties, drawings and technical documents related to properties are to be examined and approved by the Society and, where deemed necessary by the survey office, the surveyor to the Society will go to the manufacturer to inspect or witness relevant tests and the results of the tests should be able to demonstrate compliance with the approval conditions

2. 工厂的质量管理体系应保持有效运行, 并且与认可时一致。如果质量管理体系发生改变, 应经原体系认证机构审核并报本社批准。

The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.

3. 工厂认可证书获得者应接受本社每年一次的定期审核, 定期审核日为认可证书期满之日对应的每一周年日, 检查工作可在定期审核日的前后三个月内进行。Those who have obtained the certificate of works approval shall receive periodical audit done by the Society on an annual basis. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit may be done within a time span of three months before and after the annual surveillance date.

4. 在认可证书有效期内, 本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核, 以验证产品的生产是否符合经本社批准的图纸和文件。工厂应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.

5. 认可证书有效期内, 如果出现可能导致本社取消认可的情况, 工厂应及时采取有效的纠正措施。

Within the validity of the approval certificate, if cases occur that may cause the Society to withdraw the certificate, the manufacturer should take corrective actions in a prompt and effective manner.

认可后的产品检验方式/ Module of Product Inspection after Works Approval

按照规范每批抽样检验的产品/The product inspected by sampling in term of the rules:

认可后的产品检验应由本社验船师根据本社规范规定每批抽样按批准的产品检验计划进行检验, 经检验合格后由本社颁发产品证书。

After approval, product inspection should be carried out by sampling by the Surveyor of the Society in accordance with the approved product inspection scheme, and the Product Certificate will be issued by the Society upon satisfactory inspection.

对于原材料和零部件的检验要求/ Inspection Requirements for Materials and Components

产品如下原材料和零部件应由本社认可的制造厂生产/The following materials and components of the product should be manufactured by the factory approved by the Society: 钢坯/Slab.

产品如下原材料和零部件应经本社检验, 持有本社产品证书/The following materials and components of the product should be inspected and certificated by the Society: 无/Nil.

产品如下原材料和零部件的制造厂清单, 经本社批准方可变更/The list of manufacturer for the following materials and components of the product should not be changed without the Society's approval: 无/Nil.

责任声明/ Statement of Responsibility

本社的认可不影响、替代与本社授权或检验无关的各方对上述工厂的认可和发证, 并且不对与本社授权或检验无关的各方负责, 不承担其未经应允而承认、接受本社认可所导致的法律和经济责任。

The approval of the Society does not affect and replace any approval and certification of the manufacturer by any parties that bear no relation with this Society's authorization or survey and therefore takes no responsibility for these parties. The Society does not undertake any legal and economic liabilities arising from accepting this Society's certificate without prior permission from this Society.

其他/Others

本证书由原工厂认可证书 (No. FS09W00040, FS11W00019, FS12W00028) 变更并换新。

This certificate is modified and renewed from the previous Works Approval Certificate No. FS09W00040, FS11W00019, FS12W00028.

中国船级社釜山分社

CCS Busan Branch

*****本证书正文完/ End of Text*****

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Grade	Max. Dimension	Grain Refining Elements	Casting Process	Deoxidation Method	Steel Making	Delivery Condition	Z-direction
A,B	T: 50mm, W: 1300~5000mm	Al	CC	Al+Si Killed	BOF	As Rolled	N.A.
D	T: 35mm, W: 1300~5000mm	Al	CC	Al+Si Killed	BOF	As Rolled	N.A.
A,B,D	T: 50mm, W: 1300~5000mm	Al	CC	Al+Si Killed	BOF	Controlled Rolled	N.A.
A,B,D	T: 83mm, W: 1300~5000mm	Al	CC	Al+Si Killed	BOF	TMCP	Z35
A,B,D	T: 83mm, W: 1300~5000mm	Al	CC	Al+Si Killed	BOF	Normalizing	N.A.
E	T: 83mm, W: 1300~5000mm	Al or Al+Nb or Al+Nb+Ti	CC	Al+Si Killed	BOF	TMCP	Z35
E	T: 83mm, W: 1300~5000mm	Al or Al+Nb or Al+Nb+Ti	CC	Al+Si Killed	BOF	Normalizing	Z35
AH32/36	T: 35mm, W: 1300~5000mm	Al or Al+Nb or Al+Nb+Ti	CC	Al+Si Killed	BOF	As Rolled	Z35
DH32/36	T: 25mm, W: 1300~5000mm	Al or Al+Nb or Al+Nb+Ti	CC	Al+Si Killed	BOF	As Rolled	Z35
AH32/36 DH32/36	T: 50mm, W: 1300~5000mm	Al or Al+Nb or Al+Nb+Ti	CC	Al+Si Killed	BOF	Controlled Rolled	Z35
AH32/36	T: 83mm, W: 1300~5000mm	Al or Al+Nb or Al+Nb+Ti	CC	Al+Si Killed	BOF	TMCP	Z35
DH32/36 EH32/36	T: 70mm, W: 1300~5000mm	Al or Al+Nb or Al+Nb+Ti	CC	Al+Si Killed	BOF	Normalizing	Z35
AH/DH/EH32	T: 70mm, W: 1300~5000mm	Al or Al+Nb or Al+V or Al+Nb+Ti	CC	Al+Si Killed	BOF	Normalizing	Z35
AH/DH/EH40	T: 83mm	Al+Ti or Al+Nb+Ti	CC	Al+Si Killed	BOF	TMCP	Z35
AH/DH/EH36	T: 70mm	Al+Ti or Al+V or Al+Nb+Ti	CC	Al+Si Killed	BOF	Normalizing	Z35
A,B,D	T: 100mm, W: 5000mm	Al	CC	Al+Si Killed	BOF	Normalizing	N.A.
A,B	T: 100mm	Al or Al+Nb+Ti	CC	Al+Si Killed	BOF	As Rolled	N.A.

① T: Thickness, W: Width

② BOC: BOF: Basic Oxygen Furnace, CC: Continuous Casting

③ TMCP: Thermo Mechanical Control Process



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