中国船级社
CHINA CLASSIFICATION SOCIETY
工厂认可证书
CERTIFICATE OF WORKS APPROVAL

证书编号/Certificate No.
FS19PWA00030_01

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 described in the certificate.

制造厂/Manufacturer

SeAH Besteel Corporation

地址/Address

522, Oehang-ro, Gunsan-si, Jeollabuk-do, Korea

产品名称/Product

锻钢件
Steel Forgings

附加标志/Notations

无/Nil.

认可标准/Approval Standard

1. 中国船级社《材料与焊接规范》（2018）及其修改通报第1篇第5章
Chapter 5, Part One of China Classification Society Rules for Materials and Welding 2018 and its Amendments

用于/Intended for

船舶与海上设施/Ships and Offshore Installations

证书有效期至/This Certificate is valid until **2023年08月24日/ Aug. 24,2023**

发证机构 中国船级社釜山分社
Issued by CCS Busan Branch

签发日期 2020年01月15日
Date Jan. 15,2020

本证书根据中国船级社规范和相关规定签发。所有证书页为一个整体，必须同时使用。纸质证书每页均须由本社盖章方为有效。电子证书含数字签名方为有效。本证书复印件无效。任何单位和个人均不应将部分或节选本证书的部分内容。有关方对所持证书的真实性有疑问时，可以向我社检验机构咨询。
This Certificate is issued pursuant to the Rules of the Society and related regulation. All pages of the certificate are taken as a whole and are used simultaneously. No paper certificate page is valid without bearing the stamp of the Society, no electronic certificates is valid without the digital signature, 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. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices.

№ 18152553

产品明细/Product Description

锻钢件/Steel Forgings (M001)

名称/Name	属性（值）/Value	单位/Unit
产品名称/Product Name	Steel Forgings for Hull Structure	
材料/Material	Carbon and Carbon-Manganese Steel	
表面状态/Surface Machining	As Forged or As Rough Machined	
热处理/Heat Treatment	Normalizing and Tempering	
最大重量/Maximum Weight	100,000	kg
锻造方式/Forging Method	Open-die	
最大尺寸/Max. Size	18m in length	m
冶炼方式/Melting Process	EAF-LF-VD	

锻钢件/Steel Forgings (M0002)

名称/Name	属性（值）/Value	单位/Unit
产品名称/Product Name	Steel Forgings for Shafting and Machinery	
材料/Material	Carbon and Carbon-Manganese Steel, Alloy Steel	
表面状态/Surface Machining	As Forged or As Rough Machined	
热处理/Heat Treatment	Normalizing and Tempering	
最大重量/Maximum Weight	110,000	kg
锻造方式/Forging Method	Open-die	
最大尺寸/Max. Size	18m in length	m
冶炼方式/Melting Process	EAF-LF-VD	

锻钢件/Steel Forgings (M0003)

名称/Name	属性（值）/Value	单位/Unit
产品名称/Product Name	Steel Forging for Crankshaft (Combined)	
材料/Material	Carbon and Carbon-Manganese Steel, Alloy Steel	
表面状态/Surface Machining	As Forged or As Rough Machined	
热处理/Heat Treatment	Normalizing and Tempering	
最大重量/Maximum Weight	---	kg
锻造方式/Forging Method	Bending Die Forging	
最大尺寸/Max. Size	Cylinder Dia. <1000	mm
冶炼方式/Melting Process	EAF-LF-VD	

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No.: FS19PWA00030_1

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No.: QA-COM-1511-0008
试验报告日期/ Test Report Date: 2015-11-11

试验报告编号/ Test Report No.: QA-CAC-1511-0008
试验报告日期/ Test Report Date: 2015-11-06

试验报告编号/ Test Report No.: QA-IIR-1405-0001
试验报告日期/ Test Report Date: 2014-05-15

试验报告编号/ Test Report No.: HSIT-UT-140916-01
试验报告日期/ Test Report Date: 2014-09-18

试验报告编号/ Test Report No.: HSIT-SH-MT-140916-01
试验报告日期/ Test Report Date: 2014-09-18

试验报告编号/ Test Report No.: FS10W00003
试验报告日期/ Test Report Date: 2011-08-17

No. 18401429

试验报告编号/ Test Report No.： FS10W00003(C/S)
试验报告日期/ Test Report Date： 2011-04-20

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

按规范认可后应进行产品检验的产品/The product should be inspected 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船用产品证书。
After approval, product inspection should be carried out by the Surveyor of the Society in accordance with the approved product inspection scheme, and the Marine Product Certificate will be issued by the Society upon satisfactory inspection.

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，检查工作应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 shall 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业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暂停或撤消认可的情况，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 suspend or withdraw the certificate, the manufacturer should take corrective actions in a prompt and effective manner.

备注/Remarks

本证书由原工厂认可证书（No. FS15W00018_01）换新并替代原证书。
This certificate is renewed from and supersedes the previous Works Approval Certificate No. FS15W00018_01.

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