



中国船级社
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: T01.02-
FS000010

型式认可证书
CERTIFICATE OF TYPE APPROVAL

证书编号/Certificate No. SH18T00019

兹证明本证书所述制造厂生产的下列产品能够满足下面列明认可标准的要求。

This is to certify that the following products produced by the manufacturer stated in the certificate can meet the requirements of the approval standards listed below.

认可产品/ Product Approved

中/高频无线电装置
MF/HF RADIO INSTALLATION

制造厂/ Manufacturer

中电科（宁波）海洋电子研究院有限公司

CETC Ningbo Maritime Electronics Co.,Ltd.

宁波高新区扬帆路999弄5号503室

Room 503, Building No.5, 999 Lane, Yang fan Road,high tech District, Ningbo City

附加标志/ Notations

无/Nil.

认可标准/ Approval Standard

- 1.IMO A.334(IX)推荐的无线电发射机和接收机的操作标准
IMO A.334(IX) Recommendation on operational standards for radiotelephone transmitters and receivers
- 2.IMO A.421(XI)无线电电话警报信号发生器的操作标准
IMO A.421(XI) Operational standards for radiotelephone alarm signal generators
- 3.IMO A.610(15)可进行通话和数字选择性呼叫的船载中频无线电装置的性能标准
IMO A.610(15) Performance standards for shipborne MF radio installations capable of voice communication and digital selective calling
- 4.IMO A.613(15)关于可进行通话、窄带直接打印和数字选择性呼叫的船用中/高频无线电设备的性能标准
IMO A.613(15) Performance standards for shipborne MF/HF radio installations capable of voice communication, narrow-band direct-printing and digital selective calling
- 5.IMO MSC.97(73)国际高速船安全规则无线电通信设备
IMO MSC.97(73) International high speed ship safety rules radio communication equipment

证书有效期至/ This Certificate is valid until

2021年10月8日 / Oct. 8, 2021

发证机构

中国船级社上海分社

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2018年5月25日

Issued by

CCS Shanghai Branch

Date

May. 25, 2018

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，可以向我社检验机构咨询。

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.



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本地检验机构/CCS Local Office: 中国船级社上海分社 CCS Shanghai Branch 电话/Tel: +86 (21) 58851234 传真/Fax: +86 (21) 58852626



SH83798388

Nº 17734039

6. IMO MSC Cir.862 GMDSS设备在IMO性能标准的确切要求说明
IMO MSC Cir.862 CLARIFICATIONS OF CERTAIN REQUIREMENTS IN IMO PERFORMANCE STANDARDS FOR GMDSS EQUIPMENT
7. IMO A.694(17)作为全球海上遇险和安全系统（遇险和安全系统）组成部分的船载无线电设备和电子助航设备的一般要求
IMO A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids
8. IMO A.804(19)船用MF语音和数字选择呼叫无线电装置的性能规范
IMO A.804(19) Performance standards for shipborne MF radio installations capable of voice communication and digital selective calling
9. IMO A.806(19)船用MF/HF语音和窄带印字报（NBDP）无线电装置的性能规范
IMO A.806(19) Performance standards for shipborne MF/HF radio installations capable of voice communication, narrow-band direct-printing and digital selective calling
10. IMO MSC 68(68) 船用无线电通信设备性能规范修正案
IMO MSC 68(68) ADOPTION AMENDMENTS TO PERFORMANCE STANDARDS FOR SHIPBORNE RADIOCOMMUNICATION EQUIPMENT
11. IMO A.813(19) 船用电子电气设备EMC一般要求
IMO A.813(19) GENERAL REQUIREMENTS FOR ELECTROMAGNETIC COMPATIBILITY (EMC) FOR ALL ELECTRICAL AND ELECTRONIC SHIP'S EQUIPMENT
12. IEC 60945-2002 海上导航和无线电通信设备及系统 通用要求 测试方法及要求的测试结果
IEC 60945-2002 Maritime navigation and radiocommunication equipment and systems –General requirements – Methods of testing and required test results
13. ITU-R M.491-1-1986在海洋移动报文中标识码到直接印字电报标识的翻译
ITU-R M.491-1-1986 TRANSLATION BETWEEN AN IDENTITY NUMBER AND IDENTITIES FOR DIRECT-PRINTING TELEGRAPHY IN THE MARITIME MOBILE SERVICE
14. ITU-R M.492-6-1995 水上移动业务中使用直接印字电报设备的使用程序
ITU-R M.492-6-1995 Operational procedures for the use of direct-printing telegraph equipment in the maritime mobile service
15. ITU-R M.493-13-2009 用于水上移动业务的数字选择性呼叫系统
ITU-R M.493-13-2009 Digital selective-calling system for use in the maritime mobile service
16. ITU-R M.821-1-1997 用于海上移动业务的数字选择性呼叫系统的选择性扩展
ITU-R M.821-1-1997 Optional expansion of the digital selective-calling for use in the maritime mobile service
17. ITU-R M.1173-1995 1606.5KHz至4000KHz和4000KHz至27500KHz频段无线电话水上移动业务用的单边带发信机的技术特征
ITU-R M.1173-1995 TECHNICAL CHARACTERISTICS OF SINGLE-SIDEBAND TRANSMITTERS USED IN THE MARITIME MOBILE SERVICE FOR RADIOTELEPHONY IN THE BANDS BETWEEN 1606.5 kHz (1605 kHz REGION 2) AND 4000 kHz AND BETWEEN 4000 kHz AND 27500 KHz
18. ITU-R M.541-9-2004 水上移动业务中使用的数字选择呼叫设备的操作程序
ITU-R M.541-9-2004 Operational procedures for the use of digital selective-calling equipment in the maritime mobile service
19. 中华人民共和国海事局《国内航行海船法定检验技术规则》（2011）及其修改通报第4篇，第4章
Chapter 4, Part 4 of MSA of P.R.C. Domestic Regulations for the Statutory Surveys of Sea-going Ships Engaged on International Voyages 2011 and its Amendments
20. ITU-R M.625-4-2012 水上移动业务中使用自动识别的直接印字电报设备
ITU-R M.625-4-2012 Direct-printing telegraph equipment employing automatic identification in the maritime mobile service
21. ITU-R M.476-5 海上移动通信中的直接打印电报设备
ITU-R M.476-5 DIRECT-PRINTING TELEGRAPH EQUIPMENT IN THE MARITIME MOBILE SERVICE

产品明细/ Product Description

中/高频无线电装置/MF/HF RADIO INSTALLATION

型号/Model

发射频率/TX Frequency

接收频率/RX Frequency

输出功率/Output Power

发射种类/Class of Emission

接收灵敏度/Receiver Sensitivity

DSC等级/DSC Class

磁罗经安全距离/Compass Safe Distance

电源/Power Supply

系统组成/Major Parts

: WT-6000
: 1.605~27.5 MHz
: 0.5~30 MHz
: 150 W
: J3E, H3E, J2B, F1B, A1A
: J3E/H3E:+11dBuV; J2B/F1B:0dBuV
: CLASS-A
: 1 m
: 13.8VDC
: 主机: WT-6000, 天调: WAT-150,
NBDP终端: NB-1501 | Main
Unit: WT-6000, Antenna
Coupler: WAT-150, NBDP
Terminal: NB-1501



中/高频无线电装置/MF/HF RADIO INSTALLATION

型号/Model	: WT-B150
发射频率/TX Frequency	: 1.605MHz~27.5MHz 1.605MHz~27.5 MHz
接收频率/RX Frequency	: 0.5MHz~30MHz MHz
输出功率/Output Power	: 150W(PEP) W
发射种类/Class of Emission	: J3E, H3E, J2B, F1B, A1A
接收灵敏度/Receiver Sensitivity	: J3E/H3E: +11dBuV; J2B/F1B: 0dBuV
DSC等级/DSC Class	: CLASS-A
磁罗经安全距离/Compass Safe Distance	: 2 m
电源/Power Supply	: 24VDC
系统组成/Major Parts	: 控制器: WT-B150C, 主机: WT-B150M, 天调: WAT-150, NBDP终端: NB-1501 Control Unit: WT-B150C, Main Unit: WT-B150M, Antenna Coupler: WAT-150 NBDP Terminal Unit: NB-1501

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

图纸批准号/ Drawings Approval No. : SH15A00334 SH18A00047

产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No.	: JECZS20151026
试验报告日期/Test Report Date	: 2015-10-26
试验单位/ Laboratory	: 中国电子科技集团第三十六研究所计量测试中心 Measure and Test Center of No.36 Research institute of China Electronic Technology Group Corporation
试验单位地址/ Test Address	: 浙江省嘉兴市洪兴路387号 NO.387 Hongxin Road, jiaxing city, zhejiang province
试验报告编号/Test Report No.	: JECZS20170810
试验报告日期/Test Report Date	: 2017-08-10
试验单位/ Laboratory	: 中国电子科技集团第三十六研究所计量测试中心 Measure and Test Center of No.36 Research institute of China Electronic Technology Group Corporation
试验单位地址/ Test Address	: 浙江省嘉兴市洪兴路387号 NO.387 Hongxin Road, jiaxing city, zhejiang province
试验报告编号/Test Report No.	: JECZS20180415
试验报告日期/Test Report Date	: 2018-04-15
试验单位/ Laboratory	: 中国电子科技集团公司第三十六研究所计量测试中心 Measure and Test Center of No.36 Research institute of China Electronic Technology Group Corporation
试验单位地址/ Test Address	: 浙江省嘉兴市洪兴路387号 NO.387 Hongxin Road, jiaxing city, zhejiang province

产品适用范围/ Application of the Product

船舶与海上设施/Ships and Offshore Installations

认可保持条件/ Maintenance Requirements of Approval

1. 型式认可后, 如果产品及其重要零部件的设计、所用材料或制造方法有所改变, 且影响到产品的主要特性、特征; 或产品的性能指标有所更改, 且超过认可的范围, 则有关图纸和文件应经检验机构审批。并在检验机构认为必要时, 经本社检验人员见证有关试验和进行检查, 其结果应能证实仍符合认可条件。

After type approval, if there are changes to the design, materials used or manufacturing method of the product and important components and such changes affect major characteristics and properties of the product, or property indexes of the product are changed and exceed the scope of approval, related drawings and documents are to be examined and approved by the concerned survey office. Where deemed necessary by the survey office, the surveyor to the Society will go to witness relevant tests and conduct inspection and the results 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告本社批准。

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. 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 approval, the manufacturer should take corrective actions in a prompt and effective manner.

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. 如果属于获得型式认可B 模式证书, 且无需颁发船用产品证书/等效证明文件的情况, 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, 检查工作可在周年日的前后三个月内进行。If belong to the situation of the product has type approval mode B certificate, and marine product certificate/equivalent document is not necessary, those who have obtained the certificate should be subject to periodical audit every year. The periodical audit should be carried out within 3 months before and after the anniversary date which corresponds to the date of expiry of the relevant.

认可后的产品检验方式/ Method of Product Inspection after 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船用产品证书。

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 Marine 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:无/Nil

产品如下原材料和零部件应经本社检验/The following materials and components of the product should be inspected 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:

1、集成电路IC/ADS6145IRHBT 2、集成电路IC/MRF422

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

制造方: 中电科(宁波)海洋电子研究院有限公司嘉兴分公司

Manufacturer: CETC Ningbo Maritime Electronics Co., Ltd. Jiaxing branch

制造地址: 中国浙江省嘉兴市桃园路587号

Manufacturing address: No587 Taoyuan Road, Xiuzhou district, Jiaxing of China

本证书由原型式认可证书(No. SH15T00114)变更并替代原证书。

This Certificate is modified from and supersedes the previous Type Approval

Certificate No. SH15T00114.

本社已审核了产品厂无石棉声明, 但本社的审核不免除产品厂按照合同关系向订货方保证产品无石棉的责任。

The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society.

However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser under contract will not be exempted.

中国船级社上海分社

CCS Shanghai Branch



*****本证书正文完/ End of Text*****