



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
SH22PTB00089

型式认可证书
CERTIFICATE OF TYPE APPROVAL

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

中国船舶集团有限公司第七〇四研究所
Shanghai Marine Equipment Research Institute

地址/Address

中国上海市衡山路10号
No.10, Hengshan Road, Shanghai, China

产品名称/Product

智能航行与远程控制系统
Autonomous and Remotely Operated System
智能船舶系统及设备
Intelligent Ship System and Equipment

附加标志/Notations

无/Nil.

认可标准/Approval Standard

- 中国船级社《智能船舶规范》（2020）及其修改通报第1, 2, 8章
Chapter 1,2,8 of China Classification Society Rules for Intelligent Ships 2020 and its amendments
- 中国船级社《钢质海船入级规范》（2022）及其变更通告 第7篇第2章
Chapter 2, Part Seven of China Classification Society Rules for Classification of Sea-going Steel Ships 2022 and its Change Notices

用于/Intended for

船舶与海上设施/Ships and Offshore Installations

产品明细/Product Description

智能船舶系统及设备/Intelligent Ship System and Equipment (M0001)

名称/Name	属性(值)/Value	单位/Unit
型号/Type	SMERI-ADS2000	
产品名称/Product Name	智能航行与远程控制系统 Autonomous and Remotely Operated System	

证书有效期至/This Certificate is valid until 2026年10月27日/Oct. 27,2026

发证机构/Issued by 中国船级社上海分社
CCS Shanghai Branch

签发日期/Date 2022年10月28日
Oct. 28,2022

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摘录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，可以向本社检验机构咨询。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.

Form No: T01.

联系方式/Contact Us, 见本社官方网站/See official web site of the Society (<http://www.ccs.org.cn>)

UTN:P022-38252988

电源/Power Source	AC 220V, DC 24V	
软件版本号/Software Version	V1.X.X.X	
系统组成/System Component	详见附页 See additional page(s)	
外壳防护等级/Degree of Protection of Enclosure	红外一体化摄像单元、可见光一体化摄像单元 IP66, 自主航行控制箱IP23, 其余IP20 Infrared Camera Pack and Visible-light Camera Pack, IP66; Autonomous Driving Control Cabinet, IP23; Others, IP20	

批准的图纸/Approved Drawings

图纸批准号/Drawings Approval No.: NP21PPP05011, NP21PPP05011_1

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No.: A22-013-ZC

试验报告日期/ Test Report Date: 2022-08-22

试验单位/ Laboratory: 上海仪器仪表自控系统检验测试所有限公司 Shanghai Inspection and Testing Institute of Instruments and Automation System Co., Ltd.(SITIIAS)

试验单位地址/ Test Address: 上海市徐汇区漕宝路103号 No.103, Caobao Road, Xuhui District, Shanghai, China

试验报告编号/ Test Report No.: 船检字EM2022-034①, 船检字EM2022-034②

试验报告日期/ Test Report Date: 2022-07-31

试验单位/ Laboratory: 中国船舶工业电工电子设备环境与可靠性试验检测中心 China Shipbuilding Industry Environment and Reliability Test Centre for Electric and Electronic Equipment

试验单位地址/ Test Address: 江苏省扬州市临江路166号 No.166, Linjiang Road, Yangzhou, Jiangsu Province, China

试验报告编号/ Test Report No.: 船检字ER2022-034①号, 船检字ER2022-034②号

试验报告日期/ Test Report Date: 2022-07-29

试验单位/ Laboratory: 中国船舶工业电工电子设备环境与可靠性试验检测中心 China Shipbuilding Industry Environment and Reliability Test Centre for Electric and Electronic Equipment

试验单位地址/ Test Address: 江苏省扬州市临江路166号 No.166, Linjiang Road, Yangzhou, Jiangsu Province, China

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. 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，检查工作应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 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.

备注/Remarks

制造厂地址：上海市闵行区西畴路355号

Manufacturer Address: No. 355, Xichou Road, Minhang District, Shanghai, China

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

注：本证书含有附页，共2页

Note: The certificate is attached with additional 2 page(s)

系统组成/Main Components:

序号 No.	部套件名称 Equipment Name	部套件型号/规格 Equipment Type/Specification
1	态势感知系统 Situational Awareness System	SMERI-SAS
1.1	态势感知服务器 Situational Awareness Server	DELL R7525/ HATTELAND HTS41x11/HTS31470
1.2	红外一体化摄像单元 Infrared Camera Pack	SMERI-IRCP
1.3	可见光一体化摄像单元 Visible-light Camera Pack	SMERI-VLCP
1.4	RTK DGPS	ISP100
2	自主航行决策系统 Autonomous Driving Decision-making System	SMERI-ADDS
2.1	航行决策服务器 Autonomous Driving Decision-making Server	DELL R7515/ HATTELAND HTS41x11/HTS31470
2.2	网络交换机 Network Switch	CloudEngine S5731-H48T4XC
2.3	航线规划站 Voyage Planning Station	HATTELAND HD24T22 / HD19T22 / HD26T22 / HD27T22 MOXA MPC-2240/ MPC-2190/ MPC-2260
2.4	综合显示单元 Integrated Display Unit	HATTELAND HD24T22 / HD19T22 / HD26T22 / HD27T22 MOXA MPC-2240/ MPC-2190/ MPC-2260
2.5	船岸协同数据库服务器 Ship-shore Cooperative Database Server	DELL R440/ HATTELAND HTS41x11/HTS31470
2.6	不间断电源 UPS	APC SURT6000 XLIM
3	自主航行控制系统 Autonomous Driving Control System	SMERI-ADCS
3.1	自主航行控制箱 Autonomous Driving Control Cabinet	SMERI-ADCU
3.2	模式选择面板 Mode Selection Panel	B&R 4PPC70.101G-23B
3.3	模式选择开关 Mode Selector	APT LW39-25P
4	远程控制系统 Remote Control System	SMERI-RCS
4.1	船岸协同数据库服务器 Ship-shore Cooperative Database Server	DELL R440/ HATTELAND HTS41x11/HTS31470
4.2	不间断电源 UPS	SURT3000XLICH
4.3	网络交换机 Network Switch	CloudEngine S5731-H24T4XC
4.4	航线规划站	DELL Optiplex 7000

	Voyage Planning Station	DELL P2418HT Display
4.5	综合显示单元 Integrated Display Unit	DELL Optiplex 7000
		DELL P2418HT Display
		Lilaas L04 Joystick
4.6	态势重构站 Situation Reconstruction Station	DELL Optiplex 7000
		DELL P2418HT Display
4.7	视音频服务站 Video and Audio Service Station	DELL Optiplex 7000
		DELL P2418HT Display
		ME01 VHF repeater station