



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
JS24PTB00260

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

江苏海兰船舶电气系统科技有限公司
Jiangsu Highland Integration Technology Co., Ltd.

地址/Address

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No.199, Qingfeng Road, Sutong Science Park, Nantong City, Jiangsu

产品名称/Product

智能航行辅助决策系统
Smart Navigation Decision Support System

附加标志/Notations

无/Nil.

认可标准/Approval Standard

- 中国船级社《钢质海船入级规范》第7篇第1, 2章
Chapter 1 and 2, Part Seven of China Classification Society Rules for Classification of Sea-going Steel Ships
- 中国船级社《智能船舶规范》第1, 2章和第10章
Chapter 1, 2 and 10 of China Classification Society Rules for Intelligent Ships
- 中国船级社《船舶网络安全指南》2025 第1、2、3章
Chapter 1, 2, 3 of China Classification Society Guidelines for Ship Cyber Security 2025
- IACS UR E27 (Rev.1) 船载系统和设备网络韧性
IACS UR E27 (Rev.1) Cyber resilience of on-board systems and equipment

用于/Intended for

船舶/Ships

产品明细/Product Description

智能航行辅助决策系统/Smart Navigation Decision Support System (M0001)

名称/Name	属性(值)/Value	单位/Unit
型号/Type	HLD-SNS 600	
电源/Power Source	AC220V/DC24V	

证书有效期至/This Certificate is valid until 2030年06月23日/ Jun. 23,2030

发证机构/Issued by 中国船级社江苏分社
China Classification Society Jiangsu Branch

签发日期/Date 2026年01月12日
Jan. 12,2026

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。本证书凡是未注明版本的规范，其(发证时)最新版本适用于本证书。
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. For Rules with no version indication, their latest version (at the time of issuance of the certificate) applies to the certificate.



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:P026-47746931

系统组成/System Component	详见附页 See additional page	
软件版本号/Software Version	V1. X	
外壳防护等级/Degree of Protection of Enclosure	IP22	

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No. : NP18A00837, NP21PPP01975, NP24PPP02384, NP24PPP03572

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No. : HLD-2400XB
试验报告日期/ Test Report Date : 2018-09-27

试验报告编号/ Test Report No. : JECZ S202011002
试验报告日期/ Test Report Date : 2021-01-18

试验报告编号/ Test Report No. : 21AAX3101Y05-90069
试验报告日期/ Test Report Date : 2021-08-27

试验报告编号/ Test Report No. : HLD2400-20211015
试验报告日期/ Test Report Date : 2021-10-15

试验报告编号/ Test Report No. : SI25PTCCV008
试验报告日期/ Test Report Date : 2025-03-24

试验报告编号/ Test Report No. : 202511201
试验报告日期/ Test Report Date : 2025-12-29

试验报告编号/ Test Report No. : 202511077
试验报告日期/ Test Report Date : 2025-12-06

试验报告编号/ Test Report No. : 202510127
试验报告日期/ Test Report Date : 2025-11-14

试验报告编号/ Test Report No. : HLD2400-250901
试验报告日期/ Test Report Date : 2025-08-20

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. 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

智能航行辅助决策系统适用智能船舶附加标志N，具有航路设计和优化及辅助避碰功能，视觉增强，碰撞预警，搁浅报警，综合信息显示功能，以及满足内河船舶附加要求。

Smart Navigation Decision Support System is used for notations N of intelligent ships and supplies routedesign, route optimization and collision avoidance function. visual enhancement, collision warning, grounding warning, comprehensive information display functions, and to meet the additional requirements of inland ships.

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.

恶意代码防护软件：360杀毒软件；软件版本：V5.0.0.8210.

Malicious code protection software: 360 Antivirus; Software version: V5.0.0.8210.

本证书由原型式认可证书 (No. JS21PTB00297) 变更并换新。

This certificate is modified and renewed from the previous Type Approval Certificate No. JS21PTB00297.

This product is suitable for ships with the i-Ship (N) Notations.

网络安全等级：SL1（当该系统可选设备网络安全防护单元华为USG 6307E 的选用情况为在与第三方取证的可信船载系统进行通信时）。

Cyber Security Class: SL1 (When the optional equipment for the network security protection unit of the system, Huawei USG 6307E, is selected for communication with the trusted shipboard system of a third party for forensic purposes).

本产品支持不直接与不可信网络连接，不支持无线访问管理和无线使用控制。

This product does not supports direct connection to untrusted networks and does not support wireless access management and wireless control.

公司应记录软件的所有变更。软件的重大变更应通知本社，并提交相关文件进行评估。如果评估认定该变更会影响到规范中要求的功能，应重新进行相关型式试验，并进行型式认可的相关变更。

All changes in software are to be recorded by the manufacturer. Significant software changes should be notified to the China Classification Society and relevant documents should be submitted for assessment. If the assessment confirms that the change will affect the function required in the rules, relevant type test should be carried out again, and type approval need to be modified.

产品防护等级应与安装场所相适应。

Degrees of protection should meet the requirements of where the product is installed.

该产品的实船配置应用应符合船舶审图中心批准的相关图纸。

The actual ship configuration application of the product shall conform to the relevant drawings approved by the ship drawing examination center.

结合具体项目申请本社检验时，CBS资产清单、网络系统拓扑图应提交批准，配置核查报告应提交备查。

The following documentation of the specific base individual application is to be submitted for approval in each case: CBS asset inventory ;Topology diagrams ;Test report for configuration of security capabilities should be noted.

制造厂应确保产品的开发遵循安全开发生命周期中各阶段的网络安全要求，编制相应的程序和安全更新文件应持续有效，并符合本社《船舶网络安全指南》及IACS UR E27要求。

The manufacturer shall ensure that the development of products meets the cyber security requirements at each stage of Secure Development Lifecycle, and develop corresponding procedures and security

update documents that are continuously effective and comply with CCS "Guidelines for Ship Cyber Security" and IACS UR E27 requirements.

CCS Jiangsu Branch

注：本证书含有附页，共1页

Note: The certificate is attached with additional 1 page(s)

附页:

智能航行辅助决策系统系统组成

Components of Smart Navigation Decision Support System

序号/No.	设备名称/ Equipment Name	防护等级/IP
1	主控单元/Main Control Unit	IP22
2	显示单元/Display Unit	IP22
3	人机交互单元/Human Interface Unit	IP22
4	电源转换单元/Power Conversion Unit	IP22
5	网络交换机（可选）/Network Switch (Optional)	IP22
6	防火墙（可选）/Firewall (Optional)	IP22
7	串口服务器（可选）/Serial Server Unit (Optional)	IP22
8	不间断电源（可选）/UPS (Optional)	IP20
9	能见度仪（可选）/Visibility Meter (Optional)	IP56
10	船舶运动传感器（可选）/Marine Motion Sensor (Optional)	IP56
11	视频单元（可选）/Vision Display Unit (Optional)	IP56