



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
HB20PTB00061

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.

品牌拥有方/ Licensor

Northrop Grumman Sperry Marine B.V.
Woltmanstrasse 19, D-20097 Hamburg, Germany

授权制造企业/Authorized Manufacturer

S+K Electronics, Inc.
56301 US Highway 93, Ronan, Montana 59864 USA

产品名称/Product

导航设备
Navigation Equipment
航向控制系统 (HCS)
Heading Control System (HCS)

认可标准/Approval Standard

- 1974年国际海上人命安全公约及其修正案第V章第18、19条
Regulations 18 and 19, Chapter V of International Convention for the Safety of Life at Sea, 1974, as Amended
- 国际海事组织海上安全委员会决议IMO Res. MSC.64(67) Annex 3《关于自动操舵执行标准A.342(IX)决议的修正案》
IMO Res. MSC.64(67) Annex 3 Amendment to Resolution A.342(Ix) on Performance Standards for Automatic Pilots
- 国际海事组织大会决议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 Resolution 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
- IEC 62288:2014《海上导航和无线电通信设备及系统—船载导航显示器上与导航相关的信息的表示法—一般要求、试验方法和要求的试验结果》
IEC 62288:2014 Maritime navigation and radiocommunication equipment and systems - Presentation of navigation-related information on shipborne navigational displays - General requirements, methods of testing and required test results
- ISO 11674:2019 船舶和海上技术 船向控制系统
ISO 11674:2019 Ships and marine technology - Heading control systems
- IEC 60945:2002/COR1:2008《船用航行和无线电通信设备及系统—通用要求—试验方法和试验结果的要求》
IEC 60945:2002/COR1:2008 Maritime Navigation and Radiocommunication Equipment and Systems - General Requirements - Methods of Testing and Required Test Results

证书有效期至/ This Certificate is valid until 2024年10月14日/ Oct. 14, 2024

发证机构/ Issued by 中国船级社汉堡分社
CCS Hamburg Branch

签发日期/ Date 2021年02月08日
Feb. 08, 2021

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Form No: T02.

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:P021-47747667

用于/Intended for

船舶与海上设施/Ships and Offshore Installations

产品明细/Product Description**航向控制系统 (HCS) /Heading Control System (HCS) (M0001)**

名称/Name	属性(值)/Value	单位/Unit
型号/Type	NAVIPILOT 4000+	
操舵方式/Steering Method	AUTO, NAV, TRACK, NFU, FU, EXTERNAL	
电源/Power Source	24 V DC	
系统组成/System Component	Control and Display Unit: 4960 Steering Control Unit: 4961	
罗经安全距离/Compass Safe Distance	0.4 m	

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No. : HB16A00025

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No. : see additional pages

试验报告日期/ Test Report Date :

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

本证书由原型式认可证书 (No. HB16T00043_01) 变更并换新。

This certificate is modified and renewed from the previous Type Approval Certificate No. HB16T00043_01.

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.

中国船级社汉堡分社

CCS Hamburg Branch

注：本证书含有附页，共1页

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

Product Description

1. Product Description

Control and Display Unit, Type 4960, Hardware Rev: Cx, Software: 020800-0000-000 Rev.: A
Steering Control Interface Unit, Type 4961, Hardware Rev: Ax, Software 020801-0000-000 Rev: M

2. Approval Test Report

no	Report No.	Date	Test Lab / Address
1	165-16	20160707	Treo Labor fuer Umweltsimulation GmbH / Tempowerkring 19, 21079 Hamburg
2	4960-0141-01	20160622	Northrop Grumman Sperry Marine B.V. / Woltmanstrasse 19, 200097 Hamburg, Germany
3	4960-0141-02	20160610	
4	4960-0141-03	20160610	
5	JA 325-6650	20000315	Northrop Grumman Sperry Marine B.V. / 1070 Seminole Trail, Charlottesville, VA 22901 USA
6	415.423.1	20160614	CEcert GmbH / Alter Holzhafen 19A, 23966 Wismar, Germany
7	05/5061-1	20050412	EMV Services GmbH Co. KG / Harburger Schlosstr. 6-12, 21079 Hamburg, Germany
8	GL-01_02_Blu	20010201	Germanischer Lloyd