



中国船级社
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: T01.02-
HQ002021

型式认可证书 CERTIFICATE OF TYPE APPROVAL

证书编号/Certificate No. WG16T00002

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

航行设备

NAVIGATION EQUIPMENT

制造厂/ Manufacturer

Navico Auckland Limited

44 Arrenway Drive, Albany Northshore, Auckland, New Zealand

附加标志/ Notations

无/Nil.

认可标准/ Approval Standard

1. 3G Radar: IEC60945: 2002
2. 4G Radar: IEC60945: 2002
3. 6kW Radar: IEC62252: 2004
4. 10kW Radar: IEC62252: 2004
5. HDS Radar: IEC60945: 2002
6. Echosounder: IEC60945: 2002

证书有效期至/ **This Certificate is valid until**

2018年2月10日 / Feb. 10, 2018

发证机构

中国船级社温哥华办事处

Issued by

CCS Vancouver Office

签发日期

2016年5月25日

Date

May. 25, 2016

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，可以向本社检验机构咨询。
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.



1. 证书适用条件
- 1.1 经 CCS 设计认可、型式认可或工厂认可的产品及其生产厂，CCS 将颁发产品设计认可、型式认可或工厂认可证书。当 CCS 规范要求产品证书的情况下，认可证书不能替代产品证书。
- 1.1.1 设计认可系指 CCS 通过对产品图纸审查和原型/型式试验，确认产品设计满足 CCS 规范要求和其他接受标准要求的评价过程。
- 1.1.2 型式认可系指 CCS 通过产品图纸审查、型式试验和现场审核，以确认制造厂具备持续生产符合 CCS 规范要求和/或其他接受标准要求产品的能力和条件的评价过程。根据制造厂产品质量保证的能力和水平，型式认可可分为型式认可 A 和 B 两种模式。
- 1.1.3 工厂认可系指 CCS 通过文件/图纸资料审查、型式试验和现场审核，以确认制造厂具备持续生产符合 CCS 规范要求和/或其他接受标准要求产品的能力和条件的评价过程。
- 1.2 入级和法定产品经 CCS 单件/单批检验完成后，CCS 将颁发产品证书或签署等效证明文件。
- 1.2.1 产品证书是由 CCS 验船师签发的文件，以证明：a) 产品符合规范要求；b) 产品已进行规定的检验和试验；c) 检验样品取自检验产品本身；d) 产品的试验在验船师参加或根据特别商定的情况下进行。
- 1.2.2 等效证明文件是由制造厂出具并经 CCS 盖章和验船师签署的文件，以证明：a) 产品符合规范要求；b) 产品已进行规定的检验和试验；c) 检验样品取自检验产品本身；d) 产品的试验在验船师参加或根据特别商定的情况下进行。
- 1.3 对于要求型式认可和/或工厂认可而不要求持有产品证书的入级和法定产品，可由制造厂证明形式予以证明：
- 1.3.1 制造厂证明是由制造厂签发，以证明：a) 该产品经 CCS 型式认可或工厂认可；b) 产品符合规范要求；c) 产品已进行规定的检验和试验；d) 检验样品取自检验产品本身；e) 产品的试验在制造厂授权部门代表在场的情况下进行。
- 1.4 规范和法定要求以外的产品经 CCS 单件/单批检验完成后，由检验证书或试验证书予以记录和证明。
- 1.4.1 检验证书是由 CCS 验船师签署的文件，以证明：a) 符合申请方确定的产品标准；b) 检验和试验经验船师见证和/或试验报告经验船师审查；c) 试验样品取自检验产品本身。
- 1.4.2 试验证书是由 CCS 验船师签署的文件，以证明：a) 产品的试验在验船师在场下进行；b) 试验样品取自检验产品本身。
2. 证书的失效、暂停和撤销
- CCS 通过认可、检验工作所签发的证书或相关的证明文件的失效、暂停和撤销，见 CCS《钢质海船入级规范》第 1 篇第 3 章第 1 节。
3. 责任
- 3.1 CCS 承担的认可/检验服务是在所涉及的产品设计方、制造方、拥有方、销售方、供应方、修理方、使用方以及其他方履行各自职责的基础上进行的。无论 CCS 及所属验船师采用何种认可/检验方式，也不论在 CCS 名义下颁发、签署的任何报告、文件和证书在内容上如何，均不意味着可减轻或解除上述任何方应承担的任何责任。
- 3.2 CCS 签发的与认可/检验有关的任何文件，只反映检验当时的技术状况，并不表明被认可的工厂和产品的所有权和知识产权归属。与被认可的工厂和产品的所有权和知识产权有关的任何争议，与 CCS 无关。
- 3.3 CCS 的认可/检验不影响、替代与 CCS 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 CCS 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 CCS 认可/检验所导致的法律和经济责任。
- 3.4 CCS 仅对由于自身疏忽行为而直接造成的合同关系方的损失或损害承担责任，在任何情况下，CCS 均不对合同关系方的间接损失或随后引发的附加损失或损害承担责任，也不对非合同关系方的任何损失承担责任。
- 3.5 尽管有上述规定，如依法判定合同关系方所遭受的损失或损害，仅仅是由于 CCS 或其雇员、代理人或 CCS 其他代表方的疏忽行为造成的，CCS 将承担责任，并将支付赔偿，但此赔偿的数额不超过该项服务收费的 5 倍，且最大不超过人民币 200 万元。但如该损失或损害系由如下行为造成，CCS 将不承担任何责任：
- 1) CCS 雇员超越其受雇权限的行为；
- 2) CCS 代理人或其他代表方，超越 CCS 对其书面授权范围的行为。
- 3.6 对 CCS 承担责任的损失或损害的索赔，应以书面形式，在损害最初发现或损失形成的 6 个月内提出，否则将被视为彻底放弃索赔权。
- 4 适用法律和仲裁
- 4.1 本证书条款的生效、解释、执行、争议的解决均适用中华人民共和国法律。
- 4.2 除与 CCS 另有约定外，凡因与 CCS 提供的服务有关的任何争议，均应提交中国海事仲裁委员会，按照申请仲裁时该会现行有效的仲裁规则进行仲裁。仲裁裁决是最终的，对争议当事双方均有约束力。

1. THE APPLICATION OF CERTIFICATES
- 1.1 After Approval, Certificate of Design Approval, Certificate of Type Approval or Certificate of Works Approval will be issued by CCS for the products and manufacturers. Where a product certificate is required by CCS rules, the Approval Certificate cannot replace it.
- 1.1.1 Design Approval means the evaluation process to confirm that the product design is in compliance with the requirements of CCS Rules and/or other accepted standards through plan approval and prototype/type test.
- 1.1.2 Type Approval means the evaluation process to confirm the approved manufacturer's capability of continuously producing products which are in compliance with the requirements of CCS Rules and/or other accepted standards through product plan approval, type test and on-site audit. Type approval consists of two modes, type approval A and type approval B, which shall be granted to the manufacturer according to manufacturer's ability and level in product quality assurance.
- 1.1.3 Works Approval means the evaluation process to confirm the manufacturer's capability of continuously producing products which are in compliance with the requirements of CCS Rules and/or other accepted standards through product plan approval, type test and on-site audit.
- 1.2 A unit/batch inspection of classed or statutory products is to be documented as Certificate of Product or Equivalent document by CCS:
- 1.2.1 Certificate of Product is issued by the Surveyor to show that: i) the product complies with rules; ii) required inspection and test have been carried out; iii) the sample is taken from the product to be inspected; iv) the product has been tested in the presence of the Surveyor or in a specially agreed condition.
- 1.2.2 Equivalent Document is issued by the manufacturer and endorsed by the Surveyor to show that: i) the product complies with rules; ii) required inspection and test have been carried out; iii) the sample is taken from the product to be inspected; iv) the product has been tested in the presence of the Surveyor or in a specially agreed condition.
- 1.3 The classed and statutory products of which the type approval and/or works approval is required but the products certificate is not required, may be certified as Manufacturer's document:
- 1.3.1 The Manufacturer's Document is issued by the manufacturer to show that: i) the product is type approved or works approved by CCS; ii) the product complies with rules; iii) required inspection and test have been carried out; iv) the sample is taken from the product to be inspected; v) the product has been tested in the presence of the department representative authorized by the manufacturer.
- 1.4 A unit/batch inspection Products other than those specified in rules or statutory requirements is to be documented as Inspection Certificate or Test Certificate:
- 1.4.1 Inspection Certificate is issued by the Surveyor to show that: i) the product standards as determined by the applicant have been complied with; ii) the inspection and test have been witnessed by the Surveyor and/or the test report has been reviewed by the Surveyor; iii) the sample is taken from the product to be inspected.
- 1.4.2 Test Certificate issued by the Surveyor to show that: i) the product has been tested in the presence of the Surveyor; ii) the sample is taken from the product to be inspected.
2. INVALIDATION, SUSPENSION AND CANCELLATION OF CERTIFICATE
- Invalidation, suspension and cancellation of the certificates or equivalent documents issued by CCS by means of approval or certification are specified in Section 1, Chapter 3, Part 1 of CCS Rules for Classification of Sea-going Steel Ships.
3. LIABILITY
- 3.1 The service of approval / inspection undertaken by CCS is carried out on the basis that the designers, manufacturers, owners, sellers, suppliers, repairers, operators and other parties fulfill their respective responsibilities. The contents of any reports, documents and certificates issued by CCS cannot diminish any liability of any party mentioned above or absolve it therefrom, whatever the module of approval/inspection adopted by CCS and its surveyors.
- 3.2 Any approval/inspection-related documents issued by CCS only reflect the status at the time when the approval/inspection is carried out. They do not constitute the description for ownership and intellectual property rights of the approved/inspected factory and product. This Society should not be affected by any dispute over ownership and intellectual property rights of the approved/inspected factory and product.
- 3.3 The approval/inspection of CCS 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. CCS does not undertake any legal and economic liabilities arising from accepting this Society's certificate without prior permission from this Society.
- 3.4 CCS will be liable only for the loss or damage of contract parties resulting directly from its negligent act. In no event shall CCS be liable for any indirect or consequential losses or damage, and any loss of non-contract parties.
- 3.5 Notwithstanding the previous paragraph, CCS will be liable for the loss or damage due to negligent act judicially attributed exclusively to CCS and its employees, agents or other parties acting on behalf of CCS. And in no case shall the amount of this liability exceed five times the fee(s) charged by CCS in respect of the service(s) in question or 2,000,000 RMB in maximum. CCS liability for the loss or damage is specially excluded when such loss or damage arises out of an act:
- (1) by an employee of CCS acting outside the terms or scope of his/her employment; or
- (2) by any agent or other parties acting on behalf of CCS, when such act exceeds the authority granted in writing by CCS to such agent or parties.
- 3.6 Any claim for any loss or damage set forth above is to be made in writing within six months of the date the damage first discovered or the loss occurred; failure of doing so will be deemed as an absolute waiver of this right.
4. APPLICABLE LAWS AND ARBITRATION
- 4.1 The laws of the People's Republic of China shall apply to the coming into force, explanation, implementing, and resolution of dispute of the clause of the certificate.
- 4.2 Unless otherwise agreed with CCS, any dispute of whatsoever nature in respect to the service(s) provided shall be referred to China Maritime Arbitration Commission and arbitrated in accordance with its arbitration rules effective at the time of request for arbitration. The arbitration award shall be final and binding upon both interested parties.

7. GPS: IEC60945: 2002
8. AIS: IEC60945(2002); IEC62287-1(2010); IEC61108-1(2003)
9. TXL-10S-4, TXL-10S-6, TXL-25S-7 Radar: IEC60945: 2002; IEC62252: 2004
10. Halo 3, Halo 4, Halo 6 Radar: IEC60945: 2002
11. Multifunction Displays: IEC60945: 2002
12. R2009, R3016 Radar Control Units: IEC60945: 2002

产品明细/ Product Description**批准的图纸和设计计算书/ Approved Drawings and Design Calculations**

图纸批准号/ Drawings Approval No. : REFER TO OTHERS

产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No.	:	Type test reports package
试验报告日期/Test Report Date	:	2013-12-01
试验单位/ Laboratory	:	Navico
试验单位地址/ Test Address	:	Ensenada, Mexico
试验报告编号/Test Report No.	:	Type test reports package update
试验报告日期/Test Report Date	:	2014-05-27
试验单位/ Laboratory	:	Navico
试验单位地址/ Test Address	:	Ensenada, Mexico
试验报告编号/Test Report No.	:	Type test reports package update
试验报告日期/Test Report Date	:	2015-12-02
试验单位/ Laboratory	:	Navico
试验单位地址/ Test Address	:	Ensenada, Mexico
试验报告编号/Test Report No.	:	Type test reports package update
试验报告日期/Test Report Date	:	2016-04-15
试验单位/ Laboratory	:	Navico
试验单位地址/ Test Address	:	Ensenada, Mexico

产品适用范围/ Application of the Product

This product is not in compliance with IMO/SOLAS performance standards. It is intended for the installation on board the vessels while not enforced to provide by Flag Administration.

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.

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 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, 持有本社产品证书/The following materials and components of the product should be inspected and certificated 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: 无/Nil

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

1. 本证书由原型式认可证书No. WG15T00009变更并替代原证书。

This certificate is modified from and supersedes the previous Type Approval Certificate No. WG15T00009.

2. 图纸批准号/Drawings Approval No.:

WG10A00002/3/5/6, NP13A01129, NP14A03084, NP15A02192, NP15A02285, NP16A00684

3. 产品制造厂/Product Manufactory:

Electronica Lowrance de Mexico, S.A. de C.V., Ensenada, Mexico

4. 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.



中国船级社温哥华办事处

CCS Vancouver Office

*****本证书正文完/ End of Text*****

注: 本证书含有附页, 共5页

Note: The certificate is attached with 5 additional page(s)

Name of the product: Multifunction displays to shipborne navigational equipment

Product description:

Product	Brand	Model	Echo Sounder	GPS Receiver	3G Radar	4G Radar	6kw Radar	10kw Radar	AIS
HDS Gen2	Lowrance	HDS5 Gen2	x	x	x	x	x	x	x
		HDS7 Gen2	x	x	x	x	x	x	x
		HDS8 Gen2	x	x	x	x	x	x	x
		HDS10 Gen2	x	x	x	x	x	x	x
HDS Gen2 Touch	Lowrance	HDS Gen2 Touch 7	x	x	x	x	x	x	x
		HDS Gen2 Touch 9	x	x	x	x	x	x	x
		HDS Gen2 Touch 12	x	x	x	x	x	x	x
NSS	Simrad	NSS7	x	x	x	x	x	x	x
		NSS8	x	x	x	x	x	x	x
		NSS12	x	x	x	x	x	x	x
NSE	Simrad	NSE8	x	x	x	x	x	x	x
		NSE12	x	x	x	x	x	x	x
NSO	Simrad	NSO D10+MPU	x	x	x	x	x	x	x
		NSO D15+MPU	x	x	x	x	x	x	x
		MO15-L+MPU	x	x	x	x	x	x	x
		MO17-L+MPU	x	x	x	x	x	x	x
		MO19-L+MPU	x	x	x	x	x	x	x
Zeus	B&G	Zeus 8	x	x	x	x	x	x	x
		Zeus 12	x	x	x	x	x	x	x
Zeus Touch	B&G	Zeus Touch 7	x	x	x	x	x	x	x
		Zeus Touch 8	x	x	x	x	x	x	x
		Zeus Touch 12	x	x	x	x	x	x	x
Elite-5	Lowrance	Elite-5	x	x					
Elite-7	Lowrance	Elite-7	x	x					
Mark-5x	Lowrance	Mark-5x	x						

Note:

Echo Sounder Model: BSM-1, BSM-2

GPS Model: Point-1, GS25, ZG100

AIS Model: NAIS-400



[illegible]

AIS Model: NAIS-400



Product description: continued

Product	Brand	Model	TXL Radar	HDS Radar	NSE Radar				
HDS Gen2	Lowrance	HDS5 Gen2	x						
		HDS7 Gen2	x						
		HDS8 Gen2	x						
		HDS10 Gen2	x						
HDS Gen2 Touch	Lowrance	HDS Gen2 Touch 7	x						
		HDS Gen2 Touch 9	x						
		HDS Gen2 Touch 12	x						
NSS	Simrad	NSS7	x						
		NSS8	x						
		NSS12	x						
NSE	Simrad	NSE8	x		x				
		NSE12	x		x				
NSO	Simrad	NSO D10+MPU	x						
		NSO D15+MPU	x						
		MO15-L+MPU	x						
		MO17-L+MPU	x						
		MO19-L+MPU	x						
Zeus	B&G	Zeus 8	x						
		Zeus 12	x						
Zeus Touch	B&G	Zeus Touch 7	x						
		Zeus Touch 8	x						
		Zeus Touch 12	x						
HDS	Lowrance	HDS5		x					
		HDS7		x					
		HDS8		x					
		HDS10		x					

Note:

TXL Radar Model: TXL-10S-4, TXL-10S-6, TXL-25S-7

HDS Radar Model: 2kW

NSE Radar Model: 6/10/25kW



Product description: continued

Product	Brand	Model	TXL Radar	Halo Radar					
HDS Gen3	Lowrance	HDS-7 Gen3	x						
		HDS-9 Gen3	x						
		HDS-12 Gen3	x						
NSS evo2	Simrad	NSS7 evo2	x	x					
		NSS7m evo2	x	x					
		NSS9 evo2	x	x					
		NSS9m evo2	x	x					
		NSS12 evo2	x	x					
		NSS16 evo2	x	x					
Zeus2	B&G	Zeus2 7	x						
		Zeus2 9	x						
		Zeus2 12	x						
MO Monitor	Simrad	MO16-P		x					
		MO16-T		x					
		MO19-P		x					
		MO19-T		x					
		MO24-P		x					
		MO24-T		x					
R2009	Simrad	R2009	x	x					
R3016	Simrad	R3016	x	x					
Note: TXL Radar Model: TXL-10S-4, TXL-10S-6, TXL-25S-7 Halo Radar Model: Halo 3, Halo 4, Halo 6									



Shipborne navigational equipment application:

	Power (W)	Power supply (VDC)	Work frequency (Hz)
Echo Sounder	250	9-32	50k/83k/200k
GPS Receiver	2	9-18	1.575G
3G Radar	18	9-31.2	9.4G
4G Radar	20	9-31.2	9.4G
6kw Radar	120	10.8-42	9.4G
10kw Radar	250	21.6-41.6	9.4G
AIS	2	9.6-31.2	156-162M
HDS Radar 2kW	25	12	9.4G
NSE Radar 6/10/25kW	120/250/180	12/24	9.4G
Mark-5x	25A	10-17	200k
Elite-5	75A	10-17	83k/200k;1.5G
TXL-10S-4/TXL-10S-6/TXL-25S-7 Radar	230/230/700	24	9.4G
Halo 3/Halo 4/Halo 6 Radar	150	12/24	9.4G

