



中国船级社
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: T01.01-
DB000039

型式认可证书 CERTIFICATE OF TYPE APPROVAL

证书编号/Certificate No. LD10T00015_03

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

电子海图显示与信息系统

ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEM (ECDIS)

制造厂/ Manufacturer

John Lilley & Gillie Ltd

John Lilley & Gillie Ltd

17 Elm Road, West Chirton North, North Shields, Tyne&Wear NE29 8SE, UK

17 Elm Road, West Chirton North, North Shields, Tyne&Wear NE29 8SE, UK

认可标准/ Approval Standard

- 1.- IMO A.817(19), MSC.64(67) Annex 5, MSC.86(70) Annex 4
- 2.- MSC.232(82), MSC.191(79)
- 3.- IEC 61174(2008), IEC 62288(2008), IEC 61162-1(2007), IEC 60945(2002)
4. IMO A.694(17)
IMO A.694(17)

证书有效期至/ This Certificate is valid until 2015年3月17日 / Mar. 17, 2015

发证机构 中国船级社伦敦办事处
Issued by CCS London Office

签发日期 2011年3月18日
Date Mar. 18, 2011

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.



中国船级社总部/CCS headquarters: 北京市东直门南大街9号船检大厦

邮编: 100007 电话/Tel: +86(10)58112288 传真/Fax: +86(10)58112811

CCS Mansion, 9 Dongzhimen Nan Da Jie, Beijing 100007, China

网址/Web Site: <http://www.ccs.org.cn>

本地检验机构/CCS Local Office:

中国船级社伦敦办事处

CCS London Office

电话/Tel: 0044-020-76635628 传真/Fax: 0044-020-76635824

LD18298523

Nº 10309966

第 1 页 共 3 页 / Page 1 of 3

产品明细/ Product Description

电子海图显示与信息系统/Electronic Chart Display and Information System

型号/Type

: Navmaster ECDIS 800
Navmaster ECDIS 1000**批准的图纸和设计计算书/ Approved Drawings and Design Calculations**

图纸批准号/ Drawings Approval No. : LD10T00015

产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No. : Function tests witnessed by CCS

试验报告日期/Test Report Date : 2011-02-22

试验单位/ Laboratory : John Lilley & Gillie Ltd.

试验单位地址/ Test Address : Birmingham, B5 7HR, UK

产品适用范围/ Application of the Product

Marine application.

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. 工厂的专业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 professional 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.

认可后的产品检验方式/ Method of Product Inspection after Approval

按照规范逐件检验的产品/The product inspected one by one 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逐件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 one by one 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: 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: 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: 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 and 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

Navmaster ECDIS consisting of the following components:

Hardware:

Computer; * LGP30 processor with integrated graphics DG41MJ

* Keyboard, LGKB-2

* Trackball, LG-TB1

* NMEA breakout box, BOB PC84

Remark: the LGP30 processor may be optionally provided with C-Map ADSP 160 Radar overlay card.

Monitor: * LGM24, or LGM24V2, or LGM24V3

PC and monitor combination model: LGS213.

Software: * Navmaster ECDIS software ver. 7.0.0.x

* C-Map SDK ver. 4.3.2.xx

* IHO presentation library ver. 3.4

For detailed type examination documentation and technical specifications of this product, please see attached.

中国船级社伦敦办事处

CCS London Office

C2

03

*****本证书正文完/ End of Text*****

注: 本证书含有附页, 共4页

Note: The certificate is attached with 4 additional page(s)

Technical Characteristics

	Navmaster ECDIS 800	Navmaster ECDIS 1000
Parameters	Electronic Chart Display and Information System (ECDIS) Navmaster ECDIS 800	Combined Monitor/CPU: Part of Electronic Chart Display and Information System Navmaster ECDIS 1000
Display	LCD 24" widescreen(16:10), LGM24 or LGM24V2 or LGM24V3	LCD 21.3" (4:3)
Power Equipment	100-240V, 50/60Hz Typical < 85W	100-240V, 50/60Hz Typical < 60W
Memory	2Gb DDR2 RAM	2Gb DDR2 RAM
Hard Disc Drive	60GB SATA/SOLID STATE	60GB SATA/SOLID STATE
Processor	Intel E8400	Intel E8400
CD/DVD	CD/DVD READ/WRITE	CD/DVD READ/WRITE
I/O Ports	6*USB/ 1*VGA(secondary, non calibrated)/ 1*DVI-D(primary, calibrated)/ 1*LAN(network)/ 1* Monitor Control/ 1*Power In/ 1* NMEA I/O (8*NMEA 0183 IN + 4* NMEA 0183 OUT)/ 1*LPT1	8*USB 1.1(4 on front/4 on rear; 2 of which are internal and decided for NavMaster key and eToken use)/ 1*VGA(for repeater) / 1*LAN(network)/ 1*Power In/ 8* NMEA 0183 Input Terminals/ 8* NMEA 0183 Output Terminals/ Generic RS232 port(assignable)
Compass Safe Distance	Standard 0.55m/ steering 0.45m	Standard 0.75m/ steering 0.30m
Mechanical	Size/Weight: 630mm(W) *465mm(H)*138mm(D) Mounting: Panel/Desktop/Deckhead or Wall Case: 1.5mm Thk mild steel Powder coated	Size/Weight: 534 mm(W) *481mm(H)*158mm(D) Mounting: Panel Case: 1.5mm Thk mild steel Powder coated



Type Examination Documentation

Description	Document No.
Navmaster User Guide	Version 7.0
General Connection Diagram: Navmaster ECDIS System	3448-A3-1
Navmaster ECDIS Hardware Installation Guide	Version 5.0
LGP30 Processor User Guide	LGP30/ug/ra/193
LGM24 Monitor User Guide	LGM24/ug/ra/191
LGM24v2 Monitor User Guide	LGMV2/ug/ra/202
LGS213 Monitor/Processor Navmaster ECDIS 1000 User Guide	LGS213/ug/ra/213
PC Maritime- IEC 61174 Edit 3 Test Results	
PC Maritime- IEC 62288 Edit 1 Test Results	
PC Maritime- S-63 Test Definitions and Scripts for Encrypted ENC's	
ECDIS Optical Test Report	OPT-CAL0002
ECDIS Optical Test Report	OPT-CAL0003
ECDIS Optical Test Report	OPT-CAL0005
ECDIS Optical Test Report	OPT-CAL0006
Radiated Emissions from Enclosed Port Test Report	EMC-RAE-LGM24V2
Radiated Emissions from Enclosed Port Test Report	EMC-RAE-ECDIS2
Radiated Emissions from Enclosed Port Test Report	EMC-RAE-LGM24V2DVI
Radiated Emissions from Enclosed Port Test Report	EMC-RAE-LGP30
Radiated Immunity Test Report	EMC-RAI-LGM24V2
Radiated Immunity Test Report	EMC-RAI-LGM24V1
Radiated Immunity Test Report	EMC-RAI-LGP16V1
Radiated Immunity Test Report	EMC-RAI-LGP30
NEMA Interface Test Report	NME-ITF-LGP30
Protection against Accidental Access to Dangerous Voltages Test Report	SFP-ADV-LGM24V2
Protection against Accidental Access to Dangerous Voltages Test Report	SFP-ADV-LGP30
Acoustic Noise and Signals Test Report	SPT-ANS-LGM24V2
Acoustic Noise and Signals Test Report	SPT-ANS-LGP30
Compass Safe Distance Test Report	SPT-CSD-LGM24V2
Compass Safe Distance Test Report	SPT-CSD-LGP30
Compass Safe Distance Test Report	SPT-CSD-LGM24V1
Compass Safe Distance Test Report	SPT-CSD-LGP16V1
Immunity to Surges Test Report	EMC-SRG-LGM24V2
Immunity to Surges Test Report	EMC-SRG-LGM24V1
Immunity to Surges Test Report	EMC-SRG-LGP16V1
Immunity to Surges Test Report	EMC-SRG-LGP30
ESD Immunity Test Report	EMC-ESD-LGM24V2
ESD Immunity Test Report	EMC-ESD-LGM24V1
ESD Immunity Test Report	EMC-ESD-LGM24V2DVI
ESD Immunity Test Report	EMC-ESD-LGP16V1
ESD Immunity Test Report	EMC-ESD-LGP30

Type Examination Documentation*Continued*

Description	Document No.
Immunity to Fast Transients Test Report	EMC-FTR-LGM24V2
Immunity to Fast Transients Test Report	EMC-FTR-LGM24V1
Immunity to Fast Transients Test Report	EMC-FTR-LGP16V1
Immunity to Fast Transients Test Report	EMC-FTR-LGP30
Conducted Emissions Test Report	EMC-COE-LGM24V2
Conducted Emissions Test Report	EMC-COE-LGM24V1
Conducted Emissions Test Report	EMC-COE-LGP16V1
Conducted Emissions Test Report	EMC-COE-LGP30
Conducted Immunity Test Report	EMC-COI-LGM24V2
Conducted Immunity Test Report	EMC-COI-LGM24V1
Conducted Immunity Test Report	EMC-COI-LGP16V1
Conducted Immunity Test Report	EMC-COI-LGP30
Immunity to Power Supply Failure Test Report	EMC-PFA-LGM24V2
Immunity to Power Supply Failure Test Report	EMC-PFA-LGM24V1
Immunity to Power Supply Failure Test Report	EMC-PFA-LGP16V1
Immunity to Power Supply Failure Test Report	EMC-PFA-LGP30
Immunity to Power Supply Short-term Variations Test Report	EMC-PSV-LGM24V2
Immunity to Power Supply Short-term Variations Test Report	EMC-PSV-ECDIS1
Immunity to Power Supply Short-term Variations Test Report	EMC-PSV-LGP30
PWS-EXC-LGM24V2	
Excessive Power Supply Test Report	PWS-EXC-LGP30
Excessive Power Supply Test Report	PWS-EXC-LGP16V1
Excessive Power Supply Test Report	PWS-EXC-LGM24V1
Extreme Power Supply Test Report	PWS-EXT-LGM24V2
Extreme Power Supply Test Report	PWS-EXT-LGP30
Extreme Power Supply Test Report	PWS-EXT-ECDIS1
Normal Power Supply Test Report	PWS-NOR-LGM24V2
Normal Power Supply Test Report	PWS-NOR-LGP30
Normal Power Supply Test Report	PWS-NOR-ECDIS1
Damp Heat Test Report	ENV-DAM-LGM24V2
Damp Heat Test Report	ENV-DAM-LGP30
Damp Heat Test Report	ENV-DAM-ECDIS1
Dry Heat Functional Test Report	ENV-DHF-LGM24V2
Dry Heat Functional Test Report	ENV-DHF-LGM24V1
Dry Heat Functional Test Report	ENV-DHF-LGP16V1
Dry Heat Functional Test Report	ENV-DHF-LGP30
Lower Temperature for Protected EUT Test Report	ENV-LOP-LGM24V2
Lower Temperature for Protected EUT Test Report	ENV-LOP-LGM24V1
Lower Temperature for Protected EUT Test Report	ENV-LOP-LGP16V1
Lower Temperature for Protected EUT Test Report	ENV-LOP-LGP30

Type Examination Documentation*Continued*

Description	Document No.
Vibration Test Report	ENV-VIB-LGM24V2
Vibration Test Report	ENV-VIB-LGM24V1
Vibration Test Report	ENV-VIB-LGP16V1
Vibration Test Report	ENV-VIB-LGP30
Test Reports Index	LGP16 and LGM24V1
Protection against Accidental Access to Dangerous Voltages Test Report	SFP-ADV-LGM24V1
Acoustic Noise and Signals Test Report	SPT-ANS-LGM24V1
NEMA Interface Test Report	NME-ITF-LGP16V1
Protection against Accidental Access to Dangerous Voltages Test Report	SFP-ADV-LGP16V1
Acoustic Noise and Signals Test Report	SPT-ANS-LGP16V1
Radiated Emission Test Report	EMC-RAE-LGP30RADAR
Enviromental and EMC Test Reports IEC60945 Ref. Report Collection Marked: H:\BS EN60945 Docuemnts\ECDIS\LGS213 Results \PWS -NOR-LG5213.doc	

