



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



COPY

证书编号/Certificate No. LD10T00002

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

ECDIS

电子海图显示与信息系统, 电子海图显示与信息系统

Electronic Chart Display and Information System, ECDIS

制造厂/ Manufacturer

KELVIN HUGHES LTD

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NEW NORTH ROAD, HAINAULT, ILFORD, ESSEX, IG6 2UR  
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认可标准/ Approval Standard

- 1.- IMO A.694(17)
- 2.- MSC.232(82), MSC.191(79)
- 3.- IEC 61174(2008), IEC 62288(2008), IEC 61162-1(2007), IEC 60945(2002)

证书有效期至/ This Certificate is valid until 2014年3月24日 / Mar. 24, 2014

发证机构 中国船级社伦敦办事处  
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Date Mar. 25, 2010

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.



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LD86693547  
No. 10308773

产品明细/ Product Description

电子海图显示与信息系统/ECDIS  
型号/Type

: MantaDigital ECDIS System with  
Widescreen Display

批准的图纸和设计计算书/ Approved Drawings and Design Calculations

图纸批准号/ Drawings Approval No. : LD08T00039

产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No. : QinetiQ/MS/EES/TSTRO800419/1  
 试验报告日期/Test Report Date : 2008-09-16  
 试验单位/ Laboratory : QinetiQ  
 试验单位地址/ Test Address : Farnborough, Hampshire, GU14 0LX, UK

试验报告编号/Test Report No. : QinetiQ/D&TS/SS/CR0605238/1.1  
 试验报告日期/Test Report Date : 2006-12-06  
 试验单位/ Laboratory : QinetiQ  
 试验单位地址/ Test Address : Farnborough, Hampshire, GU14 0LX, UK

试验报告编号/Test Report No. : BSH/6579/080330/2003/S3330  
 试验报告日期/Test Report Date : 2004-01-28  
 试验单位/ Laboratory : Federal Maritime and Hydrographic Agency(BSH)  
 试验单位地址/ Test Address : Bernhard-Nocht-Str.78, D-20359 Hamburg, Germany

试验报告编号/Test Report No. : BSH/4612/4300391/07  
 试验报告日期/Test Report Date : 2006-09-28  
 试验单位/ Laboratory : Federal Maritime and Hydrographic Agency(BSH)  
 试验单位地址/ Test Address : Bernhard-Nocht-Str.78, D-20359 Hamburg, Germany

试验报告编号/Test Report No. : TS100-1280  
 试验报告日期/Test Report Date : 2008-10-29  
 试验单位/ Laboratory : KELVIN HUGES  
 试验单位地址/ Test Address : HAINAULT, ILFORD, UK

产品适用范围/ Application of the Product

MARINE

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: in case the suppliers were changed, this Society to be informed in time.

**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. This certificate replaces the previous type approval certificate in No. LD08T00039.

2. MantaDigital 26" Widescreen ECDIS comprising of:  
 MantaDigital Desktop Display Unit(26" Color LCD) MDD-A30-26-ABAA  
 including Trackerball & Keyboard(MDD-A101)  
 or MantaDigital Console Display Unit(26" Color LCD) MDD-A20-26  
 and MantaDigital Trackerball & Keyboard MDD-A101  
 and MantaDigital ECDIS Processing Unit MDP-A2  
 or MantaDigital Deck Mount Pedestal Display Unit(26" Color LCD)  
 integrated Processor Unit, Trackball & Keyboard MDD-A2-26  
 Software: MantaDigital Core Software(ZM-1816ECDIS) Version 4.xx  
 Seven Cs Presentation Library Version 3.4.1

3. MantaDigital 20" Widescreen ECDIS comprising of:  
 MantaDigital Desktop Display Unit(20" Color LCD) MDD-A30-20-ABAA  
 including Trackerball & Keyboard(MDD-A101)  
 or MantaDigital Console Display Unit(20" Color LCD) MDD-A20-20  
 and MantaDigital Trackerball & Keyboard MDD-A101  
 and MantaDigital ECDIS Processing Unit MDP-A2  
 or MantaDigital Deck Mount Pedestal Display Unit(20" Color LCD)  
 integrated Processor Unit, Trackball & Keyboard MDD-A2-20  
 Software: MantaDigital Core Software(ZM-1816ECDIS) Version 4.xx  
 Seven Cs Presentation Library Version 3.4.1

4. MantaDigital Radar Systems--Back-up Processors and alternate displays  
 Processor units:  
 MantaDigital Processor HAP/ECDIS Back-up MDP-A6  
 MantaDigital Processor VDR/ECDIS Back-up MDP-A7  
 MantaDigital Processor S-VDR/ECDIS Back-up MDP-A8  
 MantaDigital HAP/ECDIS Back-up, Display Pedestal 20" LCD MDD-A6-20  
 MantaDigital HAP/ECDIS Back-up, Display Pedestal 26" LCD MDD-A6-26  
 MantaDigital VDR/ECDIS Back-up, Display Pedestal 20" LCD MDD-A7-20  
 MantaDigital VDR/ECDIS Back-up, Display Pedestal 26" LCD MDD-A7-26  
 MantaDigital S-VDR/ECDIS Back-up, Display Pedestal 20" LCD MDD-A8-20  
 MantaDigital S-VDR/ECDIS Back-up, Display Pedestal 26" LCD MDD-A8-26

Display units:

Manta 1700 Console Display FSD-A9  
 Manta 1700 Desktop Display FSD-A8  
 Manta 2000 Console Display FSD-A3  
 Manta 2000 Desktop Display FSD-A2  
 Manta 2300 Console Display FSD-A6  
 Manta 2300 Desktop Display FSD-A5

5. MantaDigital Radar Systems-Ancillary and Optional Units
- |   |                 |
|---|-----------------|
| MantaDigital Remote Keyboard                                | MDD-A130        |
| Serial Interface Module(provides 8 additional serial ports) | FSD-A198        |
| MantaDigital Trackerball & Pencil tray                      | MDD-A100        |
| MantaDigital Trackerball                                    | MDD-A110        |
| MantaDigital Control Panel & Trackerball                    | MDD-A102        |
| Ergonomic Trackerball (Ergopod, right handed)               | NNR-A18         |
| Ergonomic Trackerball (Ergopod, left handed)                | NNR-A18-2       |
| Dual DNC Unit   | FSD-A10         |
| Network Audio& Video Control Unit                           | FSD-A13         |
| NTI Audio & Video Switch Matrix                             | IT-SM-8#-AV-LCD |

6. The approved Drawings in No.LD08T00039 had been reviewed and found fully complied with the relevant requirements adopted by IMO Resulation.MSC.232(82) and MSC.191(79).  
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中国船级社伦敦办事处

CCS London Office



\*\*\*\*\*本证书正文完/ End of Text\*\*\*\*\*