



中国船级社
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: Q01.02-
HQ000102

型式认可证书
CERTIFICATE OF TYPE APPROVAL

模式 A
Mode A

证书编号/Certificate No. SW18Q00002_02

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

直流母联快速隔离设备

Fast DC Bus-Tie Breaker

控制电器

制造厂/ Manufacturer

Vacon Oy

Runsorintie 7, FI-65380 Vaasa Finland

附加标志/ Notations

无/Nil.

认可标准/ Approval Standard

1. 中国船级社《钢质海船入级规范》（2018）及其修改通报第4篇第2、3章
Chapter 2&3, Part Four of China Classification Society Rules for Classification of Sea-going Steel Ships 2018 and its Amendments

证书有效期至/ This Certificate is valid until

2020年6月14日 / Jun. 14, 2020

发证机构
Issued by 中国船级社斯德哥尔摩办事处
CCS Stockholm Office

签发日期
Date 2018年12月18日
Dec. 18, 2018

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，可以向我社检验机构咨询。
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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N: SW275655317

产品明细/ Product Description

控制电器 型号/Type	: Vacon DCGuard (Unit type: NXP)
额定电压/Rated Voltage	: DC 465 - 1100 V
额定电流/Rated Current	: 3 - 4140 A
额定功率/Rated Power	: 2 - 3410 kW
冷却方式/Cooling way	: Air-cooled or Liquid cooled

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

图纸批准号/Drawings Approval No. : NP18A00794

产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No.	: 10347418
试验报告日期/Test Report Date	: 2006-08-21
试验单位/ Laboratory	: Vacon Oy
试验单位地址/ Test Address	: Runsorintie 7, FI-65380 Vaasa, Finland
试验报告编号/Test Report No.	: VTT-S-00992-09
试验报告日期/Test Report Date	: 2009-02-13
试验单位/ Laboratory	: VTT
试验单位地址/ Test Address	: P.O. BOX 1000, FI-02044 Espoo Finland
试验报告编号/Test Report No.	: 10368261
试验报告日期/Test Report Date	: 2006-10-30
试验单位/ Laboratory	: CENTRIA
试验单位地址/ Test Address	: PL 62, Vierimaantie 7, FI-84101 Ylivieska Finland
试验报告编号/Test Report No.	: 228338-1
试验报告日期/Test Report Date	: 2003-05-16
试验单位/ Laboratory	: SGS Fimko Oy
试验单位地址/ Test Address	: Särkiniementie 3 P.O.Box 30, FIN-00210 Helsinki Finland
试验报告编号/Test Report No.	: 234713-1
试验报告日期/Test Report Date	: 2004-09-23
试验单位/ Laboratory	: SGS Fimko Oy
试验单位地址/ Test Address	: Särkiniementie 3 P.O.Box 30, FIN-00210 Helsinki Finland
试验报告编号/Test Report No.	: 231330-1
试验报告日期/Test Report Date	: 2004-02-12
试验单位/ Laboratory	: SGS Fimko Oy
试验单位地址/ Test Address	: Särkiniementie 3 P.O.Box 30, FIN-00210 Helsinki Finland
试验报告编号/Test Report No.	: 14454195, 14454404
试验报告日期/Test Report Date	: 2016-06-02
试验单位/ Laboratory	: Vacon Oy
试验单位地址/ Test Address	: Runsorintie 7, FI-65380 Vaasa, Finland
试验报告编号/Test Report No.	: 00738584
试验报告日期/Test Report Date	: 2017-11-27
试验单位/ Laboratory	: Danfoss Drives
试验单位地址/ Test Address	: Gorinchem, Netherland

产品适用范围/ Application of the Product

1. Intended for Ships and Offshore Installations.
2. For limitation, refer to item "Others" in this certificate.

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. 型式认可A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。

Those who have obtained the certificate of type approval A 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

认可后的产品检验由制造厂按本社批准的产品检验计划进行, 本社在文件审核合格后颁发船用产品证书。

After approval, product inspection should be carried out by the Manufacturer in accordance with the product inspection scheme approved by the Society, and the Marine Product Certificate is issued by the Society upon satisfactory documents review.

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/The following materials and components of the product should be inspected 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. Alternative manufacturing site:

Name: Vacon (China) Drives Co., Ltd. Haiyan Branch

Address: Building 6-7, No. 339, North Xinqiao Road, Wuyuan Street, Haiyan County, 314300, Jiaying City, Zhejiang Province, China.

2. Vacon DCGuard basic configuration consists of:

- aR supply fuses in each DC supply line, according to NXP inverter manual.
- Vacon NXP inverter. (Type approved with separate certificate No. SW18Q00002_01)

- di/dt filter, with ca 2% inductance.
- Vacon DCGuard application software, named: ADFIF102.

For specific product description of certain type designation, please refer to Vacon DCGuard Peer to Peer Topology Technical data(Document ID.00738653) approved by CCS (No.NP18A00794).

3. Limitation:

The DCGuard is a directional, fault current suppressor based on current interruption by switching of IGBT transistors. This type approval is applicable for a directional and bi-directional peer-to-peer configuration.

The device is used for fault current suppression and does not replace circuit breakers or switches for isolation. The system design of a specific application needs to be approved on a case by case basis.

4. aR fuse and di/dt filter are not included in this type approval certificate.

5. To ensure safe disconnection of the VACON DCGuard, a mechanical disconnecter is required in front of each VACON DCGuard.

6. 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.

7. 本证书基于原型式认可证书(No.SW18Q00002_01)变更,原证书保持有效。

This Certificate is modified from the previous Type Approval Certificate No.SW18Q00002_01, the previous certificate remains valid.

中国船级社
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中国船级社斯德哥尔摩办事处

CCS Stockholm Office

*****本证书正文完/ End of Text*****

