



中国船级社
CHINA CLASSIFICATION SOCIETY

证书格式号/Form: T01.02-
HQ003298

型式认可证书
CERTIFICATE OF TYPE APPROVAL

证书编号/Certificate No. BG16T00012 01

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

固定式压力水雾灭火装置

Fixed Pressure Water Spray Fire-extinguishing Arrangement

制造厂/ Manufacturer

Autronica Fire and Security AS

Stalsbergveien 9, Noetteroy, Norway

附加标志/ Notations

无/Nil.

认可标准/ Approval Standard

1. MSC/Circ.1165 《经修订的机器处所和货泵舱的等效水基灭火系统认可指南》及其修正案
MSC/Circ.1165 Revised Guidelines for The Approval of Equivalent Water-Based Fire-Extinguishing Systems for Machinery Spaces and Cargo Pump-Rooms, as Amended
2. 《国际消防安全系统规则》第7章及其修正案
Chapter 7 of International Code for Fire Safety Systems, as Amended
3. 1974年国际海上人命安全公约及其修正案第II-2章第10条
Regulations 10, Chapter II-2 of Amendments to 1974 SOLAS Convention, as Amended

证书有效期至/ This Certificate is valid until

2020年4月12日 / Apr. 12, 2020

发证机构
Issued by

中国船级社卑尔根办事处
CCS Bergen Branch

签发日期
Date

2016年4月13日
Apr. 13, 2016

本证书根据中国船级社《钢质海船入级规范》及其程序制定签发。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。每一页证书均须加盖本社印章方为有效。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.



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: 中国船级社卑尔根办事处 CCS Bergen Branch 电话/Tel: +47 55613500 传真/Fax:

BG79968463

Nº 15679228

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产品明细/ Product Description

固定式压力水雾灭火装置/Fixed Pressure Water Spray Fire-extinguishing Arrangement	
产品型号/Product model	: FlexiFOG total flooding
工作压力/Working pressure	: M5=1.07 MPa B1=1.03 MPa
喷头最大水平间距/Maximum horizontal spacing of nozzle	: M5=3.0x3.0 m B1=4.0x1.5 m
最大围闭空间高度/Maximum enclosure height	: 10.1 m
喷头在天花板下的距离/Distance of nozzles below ceiling	: 0.1 m for M5
最大安装高度/Max. installation height	: M5=10.1 m B1=0.3-0.6(above tank top)
距舱壁最大距离/Max. distance to bulkheads	: M5=2.2 m B1=2.0 m
喷头流量系数K/Flow factor K of nozzle	: M5=4.76 B1=2.80
喷头型号/Nozzle model	: M5-ceiling nozzle B1-bilge nozzle
喷头材料/Nozzle material	: Brass

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

图纸批准号/ Drawings Approval No. : NP15A03483

产品认可试验报告/ Approval Test Report

试验报告编号/Test Report No.	: NBL F06118
试验报告日期/Test Report Date	: 2006-11-10
试验单位/ Laboratory	: SINTEF
试验单位地址/ Test Address	: Trndheim, Norway
试验报告编号/Test Report No.	: NBL F01105
试验报告日期/Test Report Date	: 2001-12-06
试验单位/ Laboratory	: SINTEF
试验单位地址/ Test Address	: Trondheim, Norway
试验报告编号/Test Report No.	: 070601-012
试验报告日期/Test Report Date	: 2007-07-17
试验单位/ Laboratory	: DFL, Danish Fire Laboratories
试验单位地址/ Test Address	: Svendborg, Denmark
试验报告编号/Test Report No.	: 070205-016
试验报告日期/Test Report Date	: 2017-12-03
试验单位/ Laboratory	: DFL, Danish Fire Laboratories
试验单位地址/ Test Address	: Svendborg, Denmark

产品适用范围/ Application of the Product

For Machinery Spaces of Category A and Cargo Pump Room, equivalent to SOLAS II-2/10

认可保持条件/ Maintenance Requirements of Approval

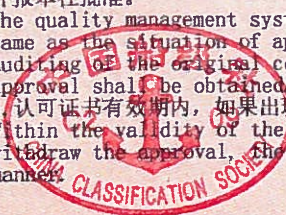
1. 型式认可后, 如果产品及其重要零部件的设计、所用材料或制造方法有所改变, 且影响到产品的主要特性、特征; 或产品的性能指标有所更改, 且超过认可的范围, 则有关图纸和文件应经检验机构审批。并在检验机构认为必要时, 经本社检验人员见证有关试验和进行检查, 其结果应能证实仍符合认可条件。

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船用产品证书。

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 Marine 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:Nozzle

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:Pump/Motor

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. The M5 nozzle is manufactured by GW-Sprinkler AS, Glamsbjerg, Denmark while the B1 nozzle is manufactured by VID Firekill, Svendborg, Denmark.
2. M5 nozzle orientation is downwards while B1 nozzle is horizontal.
3. FlexiFog total flooding is a water mist system with a 1% AFFF foam concentrate additive, composed of nozzles, galvanised steel piping, section valves, strainers and electrically driven pumps
4. The system is to be designed with one layer of ceiling mounted nozzles and one layer of bilge nozzles.
5. Arrangement drawings and calculations are to be submitted for approved in each case where it is proposed to install this system. Control Panel schematics are also to be submitted. All principal components of the system are to be identified with their location in relation to the protected space(s) indicated.
6. Components of the system refer to additional page.
7. This certificate will renew and supercede previous CCS type approval cert. GB11T00024_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.



中国船级社卑尔根办事处

CCS Bergen Branch

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注: 本证书含有附页, 共1页

NO. 15920536

List of main components for FlexiFOG total flooding system

Part no.	Description	Material
116-901110.KIT	Control cabinet	Steel
116-90103X	Operating panel (different sizes)	Steel
116-90103X	Operating panel touch screen (different sizes)	Plastic
116-146507	Pressure transmitter 0-25 bar, 0-10 V	Stainless steel
116-145160	Pressure gauge 0-25 bar, 63mm	AISI304
116-175XXX	Water pump (different sizes)	Steel
116-176XXX	Foam pump (different sizes)	Stainless Steel
116-9024XX.ME	Pump starter cabinet (different sizes)	Steel
116-11963X	Zone valve PN16 (different sizes)	Cast bronze
116-1197XX	Zone valve PN16 (different sizes)	Cast iron
116-110440.XX	Butterfly valve (NC/NO)	Cast steel
116-1100XX	Butterfly valve manual oper. (different sizes)	Cast steel
116-137XXX	Check valve with hand wheel (different sizes)	Stainless steel
116-1364XX	Valve foot PN25 (different sizes)	Bronze
116-100XXX	Ball valve manual oper. (different sizes)	Stainless steel
116-170XXX	Strainer 320 micron (different sizes)	Stainless steel
116-9311XX	Valve drain/test (different sizes)	Stainless steel
116-1177XX	Valve pressure reducing (different sizes)	Ductile iron
116-1156XX	Valve safety pumparound (different sizes)	GSC 25
116-1150XX	Valve safety pumparound (different sizes)	Bronze
116-169XXX	Foam tank (different sizes)	LLDPE
116-5044XX	Foam proportioner (different sizes)	Bronze
116-1050XX	Ball valve, electric 220 VAC (different sizes)	Stainless steel
116-138560	Push button manual release momentary	ABS
116-139602	Alarm audible/visual, 24 VDC	ABS
116-139606	Alarm audible/visual, 24 VDC, TF	ABS
116-900930	Nozzle M5	Naval brass
116-900950	Nozzle B1 bilge	Naval brass
116-902480	Power distribution cabinet	Steel
116-905402	Air accumulator cabinet	Steel

