



Marine & Offshore

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This certificate is not valid when presented without the full attached schedule
composed of 7 sections
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Notified Body 2690 - MARINE EQUIPMENT DIRECTIVE 2014/90/EU

EC TYPE EXAMINATION CERTIFICATE

as per Module B of Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations and Commission Implementing Regulation (EU) 2019/1397 of 06 Aug. 2019

This certificate is issued to:

RG Green Systems S.L.

Burgos - SPAIN

for the type of product

FIXED WATER BASED LOCAL APPLICATION FIRE FIGHTING SYSTEMS COMPONENTS FOR USE IN CATEGORY "A" MACHINERY SPACES

Local application system RG-W FOG with nozzle EMM-540856

Requirements:

SOLAS 74 convention as amended, Regulations II-2/10, X/3
IMO Res. MSC.36(63) -(1994 HSC Code)- as amended, 7
IMO Res. MSC.97(73) -(2000 HSC Code)- as amended, 7
IMO MSC.1/Circ.1387

This certificate is issued on behalf of the French Maritime Authorities to attest that Bureau Veritas Marine & Offshore did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations.


This certificate will expire on: 21 Jul 2021

For Bureau Veritas Marine & Offshore Notified Body 2690,

At BV BILBAO, on 27 Apr 2020,

Juan Jose GUTIERREZ GARCIA



This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark ) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. Bureau Veritas Marine & Offshore is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Local application system RG-W FOG with nozzle EMM-540856

High pressure stainless steel nozzles.

Nozzle type	Minimum operating pressure (bar)	Capacity (l/min @ 100 bars)	K-factor (l/min/bar ^{1/2})
EMM-540856	100	20	2.04

2. DOCUMENTS AND DRAWINGS:

As per the Manufacturer's drawing N° "an289cs1.dwg" dated 29/10/2012 for nozzle "EMM-540856".

3. TEST REPORTS:

3.1 - Test report N° VTT-S-9441-08 dated 11/11/2008 as per IMO Resolution MSC/Circ. 913, from VTT Technical Research Centre of Finland, Finland.

3.2 - Nozzles:

3.2.1 - Test report N° WAL 14088 dated 09/12/2014, as per IMO MSC/Circ.1165 Appendix A as amended by MSC.1/Circ.1269 and amendment N° "1. amendment" (Annex n° 01/10) dated 30/06/2016, from VdS Schadenverhütung, Germany.

3.2.2 - Test report N° VTT-S-08304-12 dated 04/12/2012, as per IMO MSC/Circ 1165 paragraph 4.20 "Clogging tests on RG-Systems high pressure water mist spray heads", from VTT Technical Research centre of Finland, Finland.

4. APPLICATION / LIMITATION:

4.1 - The arrangement of the system, the specification of pumps, pipes and other components, the hydraulic calculations, the wiring diagrams and the service manual are to be submitted for each ship application.

4.2 - Installation guidelines:

Nozzle type	EMM-540856
Maximum horizontal nozzle spacing (m)	4.7 (square arrangement)
Minimum height (between fire source and nozzles) (m)	2
Maximum height (between fire source and nozzles) (m)	7
Nozzle orientation	Vertical

3x3 grid: Outer nozzles of the nozzles grid should be located outside of the protected area at a distance of at least ¼ of the maximum nozzle spacing.

Single spray heads or single rows are accepted when half spacing is used and outer nozzles are located as described above.

4.3 - In the scope of classification, manual means shall be available for the ventilation control while the system is operating.

4.4 - The fitting aboard is to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS:

This certificate alone does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D Production Quality Assurance or module E Product Quality Assurance or module F Product Verification of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.

6. MARKING OF PRODUCT:

Reference is made to MED 2014/90/EU chapter 2.

In particular Article 10.3 specifies that the wheelmark shall be followed by the identification number of the Notified Body involved in the production control phase (module D, E or F) and by the year in which the mark is affixed (4 digits or last 2 digits).

7. OTHERS:

7.1 - It is **RG Green Systems S.L.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Certificate supersedes EC Type Examination Certificate N° 22540/A0 EC issued on 21/07/2016 by the Society.

*** END OF CERTIFICATE ***