



MARINE DIVISION

Certificate number: 19013/B0 EC

File number: ACI 1702/014/001

Annex A1 Item number: A.1/3.45

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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Notified Body 0062 - MARINE EQUIPMENT DIRECTIVE 96/98/EC

EC TYPE EXAMINATION CERTIFICATE

*as per Module B of European Union Council Directive 96/98/EC on marine equipment
as amended by Commission Directive 2011/75/EU*

This certificate is issued to

KIDDE PRODUCTS
Lancaster - UNITED KINGDOM

for the type of product

EQUIVALENT FIXED GAS FIRE EXTINGUISHING SYSTEMS COMPONENTS (EXTINGUISHING MEDIUM, HEAD VALVES AND NOZZLES) FOR MACHINERY SPACES AND CARGO PUMP ROOMS

Fixed gas fire extinguishing system for machinery spaces and cargo pump-rooms - Type "ARGONITE".

Requirements:

SOLAS 74 convention as amended, Regulations II-2/10, X/3

IMO Resolution MSC.97(73)-(2000 HSC Code) 7

IMO Resolution MSC.98(73)-(FSS Code) 5

IMO MSC/Circ.848

IMO MSC.1/Circ.1317

This certificate is issued under the French Maritime Authority to attest that BUREAU VERITAS did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Council Directive 96/98/EC of 20 December 1996 as amended.


This certificate will expire on: 17 Apr 2018

For BUREAU VERITAS Notified Body 0062,

At BV LONDON, on 17 Apr 2013,

Spencer Yule



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 B 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. 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 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 Division 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 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 :

Fixed gas fire extinguishing system for machinery spaces and cargo pump-rooms - Type "ARGONITE".

The system consists in:

- Non-halogenated inert gas, type IG-55:

- Trade name:	ARGONITE
- Composition:	50% argon, 50% nitrogen
- LOAEL:	52%
- NOAEL:	43%

- Seamless steel cylinders standard sizes are 15.9 L, 67.5 L and 80 L;

- Filling conditions: pressurised to 150, 200 and 300 Bar at 20°C.

The pressure in the system pipework is within the range 12 to 60 Bar.

2. DOCUMENTS AND DRAWINGS :

As per Manufacturer's :

- Operation and Maintenance Procedure, revision 10a, dated 2012-09-14

- Installation Procedure, revision 10a, dated 2012-09-14

- System Design, revision 10a, dated 2012-09-14

3. TEST REPORTS :

3.1- Test report N° RE99006 dated March 1999 as per IMO MSC/Circ. 848 issued by DIFT Laboratories, Denmark.

3.2- Test report N° PEA10004 Serial N° 13765 dated 21.12.2012 as per IMO MSC/Circ. 848 as amended by IMO MSC.1/Circ.1267.

4. APPLICATION / LIMITATION :

4.1- ARGONITE extinguishing medium should be type approved.

4.2- Materials compatibility : metals and elastomers shall be suitable for use with ARGONITE (as per Manufacturer's recommendation).

4.3- Flexible hoses are to be type approved.

4.4- Containers and associated pressure components are to be designed to a code of practice recognized by Bureau Veritas.

4.5- Burst disc / see § 4.13 herebelow.

4.6- The following documentation must be submitted in each separate application: system design and operation principles; capacity calculations; wiring diagram and cable specifications showing cable layout, alarm circuitry and location of the release station; material specification and dimensions; control arrangement for closure of openings and stop fans; isometric drawings together with pressure loss & emission time calculation; inspection and maintenance procedures.

4.7- Operating temperature range: from -20°C to +55°C.

4.8 - Mass of ARGONITE required: $W = (V/s)*f$ where,

V: Net volume of space to be protected;

s: Specific vapour volume (m³/kg) = 0.6598 + 0.002416T;

T: Temperature in °C;

f: Flooding Factor (m³ ARGONITE / m³ protected space) = $\ln(100/(100-c))$

c: minimum design concentration of 47.4% @ 20 °C (including safety factor + 30 % as per IMO

MSC.1/Circ.1267)

4.9 - 85% of the design concentration is to be discharged in 120s or less.

4.10 - Minimum extinguishing hold time: 15 min.

4.11- Mechanical ventilation shall be stopped before the system is operating.

4.12- The system is to be designed as per the annex of IMO MSC/Circ. 848, as amended by IMO MSC.1/Circ.1267).

4.13- The pressure rating of the safety burst disc is to be less than 1.5 x the design pressure.

4.14- Suitable warning of the possible products of agent decomposition is to be displayed at the release station and on the access doors to the protected space, the minimum agent hold time as well.

4.15- The discharge nozzles are to be so positioned that a uniform distribution of agent is obtained.

4.16- On completion of the installation final acceptance of the system is dependant of satisfactory survey.

5. PRODUCTION SURVEY REQUIREMENTS :

This certificate 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 E "Product Quality Assurance" or F "Product Verification" of Annex B of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.

6. MARKING OF PRODUCT :

Markings as per MED 96/98/EC when authorized by a Notified Body :

☒ YYYY/XX where YYYY is the number of the Notified Body undertaking surveillance module (when BV, 0062) and where XX are the last two digits of year mark affixed.

7. OTHERS :

7.1- This approval is given on the understanding that the Manufacturer will accept full responsibility for informing shipbuilders or their sub-contractors of the proper methods of fitting and general maintenance of the approved equipment and the conditions of this approval.

7.2- Where subcontracting takes place, the manufacturer remains entirely and solely responsible for compliance of the supplied products with the applicable requirements.

7.3- This certificate supersedes the type approval certificate N° 19013/A1 EC issued on 12.02.2008 by the Society.

*** END OF CERTIFICATE ***