

Subject

Inspection, Testing and Survey Requirements of Fixed Gas Installations, Portable Fire Extinguishers and Emergency Escape Breathing Devices (EEBDs) onboard Bahamian Flagged Vessels

ClassNK

Technical Information

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To whom it may concern

The Bahamas Maritime Authority has notified ClassNK of BMA Information Bulletin No.97 and No.29 regarding the inspection, testing and survey requirements of fixed gas installations, portable fire extinguishers and emergency escape breathing apparatus (EEBDs) as follows.

This ClassNK Technical Information supersedes the ClassNK Technical Information No.TEC-0410 dated 10 July 2001 and No.TEC-0477 dated 25 August 2002.

1. Fixed Carbon Dioxide (CO₂) and Halon Gas Installations

(1) General Inspection and Maintenance

- (i) A visual inspection of all cylinders forming part of affixed fire extinguishing installation shall be carried out annually by a competent person. The inspection shall include a means of determining if any leakage has occurred and verification that all valves, wires, levers/pulls, pipe-work, markings and operational instructions are maintained in a satisfactory condition.
- (ii) The Company shall ensure that the inspection and maintenance of the whole system meets the requirements of the Recognized Organization and any recommendations of the installation supplier. Any aspect of the testing and maintenance of the system which is assessed by the Company (as defined in the ISM Code) to be beyond the competence of the Company's and ship's personnel shall be carried out by a competent specialist maintenance firm.
- (iii) Where the fixed installation is under maintenance and inoperable, alternative arrangements shall be made for dealing with fires in the protected spaces. Proposals for such alternative arrangements must be agreed with the Recognized Organization and the BMA.

(2) Hydrostatic Pressure Testing of Carbon Dioxide and Halon Gas Cylinders

- (i) All cylinders are to be hydrostatically tested after twenty (20) years from the date of manufacture, and every five (5) years thereafter. A record of the hydraulic pressure test must be legibly marked on the cylinders.
- (ii) Any cylinder which has been discharged, or has a reduction in pressure of 10% or more from its original pressure as stamped on the cylinder, or shows signs of external corrosion, must be inspected, hydrostatically tested and replaced or recharged.

(To be continued)

NOTES:

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- (iii) With regard to potential leakage and losses to atmosphere in the course of Halon transfer, and the limited availability of Halon reception facilities, periodical hydrostatic testing of cylinders containing Halon Gas may be waived on application to the BMA. This is subject to a satisfactory alternative inspection, to be proposed by a Bahamas Recognized Organization.
- (iv) Low Pressure CO₂ systems may be exempted from hydrostatic pressure testing, subject to the following:
 - (a) The tank is to be constructed of a material which is not ordinarily prone to corrosion (e.g. Stainless Steel, Aluminium or similar).
 - (b) Fittings and inspection of the tank are in accordance with Classification Society requirements.
 - (c) Documentary evidence to show that the tank and associated systems have been inspected and serviced annually. Annual inspection should include removal of insulation and sample inspection in way of pipes and fittings. The insulation and vapour barrier is to be properly reinstated.
 - (d) The tank shall not be exposed to extremes of temperature or pressure. Such exposure will cause the inspection and testing regime to be reviewed. The BMA is to be notified in such cases.
- (3) Discharge or Loss of Pressure of Existing Halon Gas Cylinder
 - (i) In the event of the discharge or loss of pressure of the Halon Gas cylinders the BMA will accept the replenishment of the used cylinders which remain in satisfactory condition.
 - (ii) The safety of the vessel and its crew remains paramount and if Halon Gas is not readily available, the ship will be required to ensure that the affected space has adequate fire fighting capability prior to departure from port. The adequacy of any temporary arrangement shall be to the satisfaction of the Recognized Organization and the BMA, taking into account the relevant guidance in IMO MSC Circular 775.

2. Portable Fire Extinguishers

The following requirements for portable fire extinguishers are to be complied with.

- (1) The requirements of MSC Circular 850
 - (i) All fire extinguishers are in place, properly arranged, and are in proper condition.
 - (ii) All fire extinguishers are checked for proper location, charging pressure and condition.
- (2) The requirements of IMO Resolution A.951(23)
 - (i) Extinguishers should be subject to periodical inspections in accordance with the manufacturer's instructions and serviced at intervals not exceeding one (1) year.
 - (ii) At least one extinguisher of each type manufactured in the same year and kept on board a ship should be test discharged at five (5) yearly intervals (as part of a fire drill).
 - (iii) All extinguishers together with propellant cartridges should be hydraulically tested in accordance with the recognized standard or the manufacturer's instruction at intervals not exceeding ten (10) years.
 - (iv) Service and inspection should only be undertaken by, or under the supervision of, a person with demonstrable competence, based on the attached inspection guide.

(To be continued)

- (v) Records of inspections should be maintained. The records should show the date of inspection, the type of maintenance carried out and whether or not a pressure test was performed.
- (vi) Extinguishers should be provided with a visual indication of discharge.
- (vii) Instructions for recharging extinguishers should be supplied by the manufacturer and be available for use on board.
- (3) BMA's specific requirements
 - (i) All extinguishers shall be examined annually by a qualified and experienced competent person and records of the examinations shall be retained on board.
 - (ii) The containers of permanently pressurised fire extinguishers, propellant bottles of non-pressurised extinguishers and other extinguishers must be hydraulically pressure tested at intervals of ten (10) years. Containers of non-pressurised extinguishers shall also be tested at interval of ten (10) years.
 - (iii) If the loss of gas from a carbon dioxide extinguisher or propellant bottle of any other type of extinguisher exceeds by 10% of the original charge as stamped on the extinguisher or bottle, the extinguisher or bottle must be inspected and recharged. Any extinguisher or bottle which has excessive corrosion shall be replaced.
 - (iv) Records shall be maintained onboard of:
 - (a) Annual inspections
 - (b) Other maintenance and testing,
 - (c) Deficiencies identified and corrective actions performed.
- 3. EEBDs
 - (1) Inspections and testing
 - (i) Maintenance shall be in accordance with the manufacturer's instruction and inspection, by a competent person, shall be undertaken annually.
 - (ii) Hydrostatic testing of the cylinder shall be undertaken at least once every five (5) years or in accordance with the manufacturer's instruction if such testing is required on a more frequent basis. The test pressure and test date shall be clearly and permanently marked on the cylinder.
 - (2) Records

Records of inspection, maintenance and testing shall be retained onboard for examination. The records must include the test certificates and the inspection status on each cylinder.
- 4. Competent Person

A competent person is one who has achieved a level of technical skill (incorporating theoretical knowledge and practical experience) to be able to complete a task or activity safely and to the specified standard. The Company with responsibility for management of the ship under the requirements of the ISM Code is responsible for assessing and selecting a suitable "competent person". Documentary evidence of personnel competence must be available on board for verification by Bahamas Approved Inspectors and Recognized Organization. Refer to BMA Information Bulletin No.89.

(To be continued)

5. Additional Survey Requirements

- (1) During SE Surveys, Recognized Organizations shall verify that:
 - (i) The manufacturer's maintenance instructions are on board.
 - (ii) All fire fighting equipment and EEBDs have been inspected and maintained in accordance with the manufacturer's instructions and the BMA's requirements.
 - (iii) Records of inspections, maintenance and pressure tests are maintained.
 - (iv) Spares and spare charges are provided properly.
- (2) Recognized Organizations shall refer, with relevant recommendations, any Bahamian ship which does not satisfy any of the foregoing requirements to the BMA prior to the issue or endorsement of a statutory SE Certificate.

For any questions about the above, please contact:

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Attachment:

1. Inspection guide of IMO Resolution A.951(23)

Attachment 1. to
ClassNK Technical Information No. TEC-0711

ANNUAL INSPECTION	
Safety clip and indicating devices	Check to see if the extinguisher may have been operated.
Pressure indicating device	Where fitted, check to see that the pressure is within limits. Check that dust covers on pressure indicating devices and relief valves are in place.
External examination	Inspect for corrosion, dents or damage which may affect the safe operation of the extinguisher.
Weight	Weigh the extinguisher and check the mass compared to the fully charged extinguisher.
Hose and nozzle	Check that hoses and nozzles are clear and undamaged.
Operating instructions	Check that they are in place and legible.
INSPECTION AT RECHARGE	
Water and foam charges	Remove the charge to a clean container if to be reused and check if it is still suitable for further use. Check any charge container.
Powder charges	Examine the powder for reuse. Ensure that it is free flowing and that there is no evidence of caking lumps or foreign bodies.
Gas cartridge	Examine for damage and corrosion.
INSPECTION AT FIVE AND TEN YEAR INTERVALS	
INSPECTION AFTER DISCHARGE TEST	
Air passages and operating mechanism	Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check the operating and discharge control. Clean and lubricate as required.
Operating mechanism	Check that the safety pin is removable and that the lever is undamaged.
Gas cartridge	Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits.
O-ring washers and hose diaphragms	Check O-rings and replace hose diaphragms if fitted.
Water and foam bodies	Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage.
Powder body	Examine the body and check internally for corrosion and lining deterioration.
INSPECTION AFTER RECHARGE	
Water and foam	Replace the charge in accordance with the manufacturer's instructions.
Reassemble	Reassemble the extinguisher in accordance with the manufacturer's instructions.
Maintenance label	Fill in entry on maintenance label, including full weight.
Mounting of extinguishers	Check the mounting bracket and stand.
Report	Complete a report on the state of maintenance of the extinguisher.

Inspection guide of IMO Resolution A.951(23)