



Maritime and Coastguard Agency

MARINE GUIDANCE NOTE

## MGN 355 (M)

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# Periodic Inspection, Testing and Maintenance of Fixed Bulk Dry Powder Fire Extinguishing Systems

Notice to all Designers, Builders, Companies, Masters and Officers of Ships

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### PLEASE NOTE:-

Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel and you should consider seeking independent legal advice if you are unsure of your own legal position.

### Summary

The purpose of this Notice is to draw attention to this Administrations guidelines for the proper maintenance and testing of fixed bulk dry powder fire extinguishing systems.

### Key Points

- All fire protection systems and appliances should at all times be in good order and available for immediate use while the ship is in service.
- If fire protection systems are under maintenance or repair, then suitable arrangements should be made to ensure safety is not diminished.

## 1. INTRODUCTION

The Regulations and standards applicable to this Notice are:-

SOLAS Chapter II-2 Regulations 14.1 and 14.2.2

IMO MSC / Circ. 850, Guidelines for the maintenance and inspection of fire protection systems and appliances

Merchant Shipping SI 1998 No. 1012, The Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 - Part 11 - Regulations 44 and 50

Merchant Shipping SI 2003 No. 2951, The Merchant Shipping (Fire Protection) Regulations (Amendment) Regulations 2003 - Regulation 50A

Merchant Shipping Notice MSN 1665 (M), The Merchant Shipping (Fire Protection) Regulations 1998: Fire fighting equipment – Schedule 4

## 2. ANNUAL INSPECTION

Annual inspections are to be undertaken by an accredited service agent

The system should be visually inspected, e.g. for leakages, clear nozzles, pipe condition, charging pressure, etc., and the dry powder charge should be fully agitated with nitrogen, in accordance with system manufacturers' instructions.

*Note: due to the powder's affinity for moisture, any nitrogen gas introduced for agitation must be moisture free.*

Only in exceptional circumstances, the annual inspection may be carried out by a member of the ship's crew who has received the necessary training, specific to the onboard system carried, and who carries out the work under direct supervision of a senior officer holding an advanced fire fighting certificate (experienced person holding a Merchant Shipping STCW II/2 or III/2 unlimited certificate of competency and an Advanced Fire Fighting certificate). All work should be carried out as part of a Planned Maintenance System with all necessary procedures, work instructions, manuals, tools, spares and calibrated test equipment readily available.

### **3. 2-YEARLY INSPECTION**

In addition to the inspections referred to in section 2, the following should be undertaken at least once **every two years** by an accredited service agent.

- Blow-through with nitrogen to ensure associated pipes and nozzles are clear.
- Operational test of local and remote controls and section valves.
- Contents verification of propellant gas cylinders containing nitrogen (including remote operating stations).
- Sample of dry powder should be tested for moisture content.
- Powder containment vessels safety valves and discharge hoses should be subjected to a full working pressure test.

### **4. 10-YEARLY INSPECTION**

Powder containment vessels and associated piping should be subject to hydraulic testing carried out by an accredited service agent at intervals not exceeding **10 years**.

### **5. ADDITIONAL NOTES**

The replenishment and test regime for the high-pressure nitrogen cylinders is identical to that for CO<sub>2</sub> cylinders for fixed-gas fire extinguishing systems.

## More Information

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