
	<p>HEALTH, SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT SYSTEM</p> <p><b>4.21. FIRE FIGHTING EQUIPMENT AND LIFE SAVING EQUIPMENT TESTING AND INSPECTIONS</b></p> <p>HSE PROCEDURES MANUAL</p>	<p>Sect : 4.21  Page : 1 of 10  Date : 7-Aug-25  Rev : 10.1  Appr : DPA</p>
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# FIRE FIGHTING EQUIPMENT AND LIFE SAVING EQUIPMENT<sup>1</sup> TESTING AND INSPECTIONS

## 1. GENERAL

### 1.1. Introduction

**Mespas**<sup>2</sup> constitutes Company instructions for carrying out maintenance and inspections for the fire protection and fire fighting appliances and systems installed on board.

The **maintenance instructions**<sup>3</sup> has been compiled with the aim of improving ship's staff way of maintaining the fire protection systems and appliances and proper recording. With the included guidance ship staff are made aware of the regulations. These **Mespas**<sup>4</sup> records will be reviewed by Company and external inspectors for verification of compliance with the regulations.

These check lists have been compiled in accordance with the following rules, regulations, policy, and manufacturer's instructions.

- i. SOLAS regulation II-2/14, III/20, III/36<sup>5</sup>
- ii. FSS Code
- iii. IMO MSC/Circ.1432
- iv. IMO Res.A.951(23)
- v. IMO MSC/Circ.1318
- vi. IMDG Code
- vii. Company SMS
- viii. Manufacturer's Manual
- ix. MSC.402(96)<sup>6</sup>

### 1.2. Operational Readiness

All fire protection systems and appliances should be in good order and readily available for immediate use at all times while the ship is in service. If a fire protection system is undergoing maintenance, testing or repair, then suitable arrangements should be made to ensure safety is not diminished, through the provision of alternate fixed or portable fire protection equipment, or other measures.

<sup>1</sup> W 03 / 2020


<sup>2</sup> W 03 / 3024

<sup>3</sup> W 28 / 2023

<sup>4</sup> W 03 / 2024

<sup>5</sup> W 03 / 2020

<sup>6</sup> W 03 / 2020

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### 1.3. Maintenance and Testing of Fire-Fighting Equipment<sup>7</sup>

Certain maintenance procedures and inspections may be performed by competent crew members who have completed an advanced fire-fighting training course, while others should be performed by persons specially trained in the maintenance of such systems. The maintenance plan indicates which parts of the recommended inspections and maintenance are to be completed by ship staff, and by **other<sup>8</sup>** trained personnel.

In cases where the inspections and maintenance are carried out by trained service technicians other than the ship's crew, inspection reports should be provided at the completion of the testing.

In addition to the onboard maintenance and inspections stated in the guidelines, manufacturer's maintenance and inspection guidelines should be followed.

Prior to performing any work, a plan for carrying out safe maintenance, inspection, and testing must be developed to account for all personnel and all foreseeable hazards. The plan, among other things, must establish effective communication between the inspection personnel and on-duty crew.<sup>9</sup>

### 1.4. Maintenance of Lifeboat, Rescue Boat and Davits<sup>10</sup>

Company ensures that maintenance, thorough examination, operational testing, overhaul, and repair of the following equipment is conducted according to SOLAS III/20, SOLAS III/36, the LSA Code and IMO Resolution MSC. 402(96):

- i. lifeboats (including free-fall lifeboats);
- ii. rescue boats and fast rescue boats; and
- iii. launching appliances and release gear (on-load and off-load) for lifeboats, rescue boats, fast rescue boats and davit-launched liferafts.

This includes the primary and secondary means of launching appliances for free-fall lifeboats.

The Company ensures that the following inspections and maintenance activities as per IMO Resolution MSC. 402(96) and MSC.1/Circ. 1578 are taken into account, and that they are carried out by the appropriate entities.

Interval (§ references are to MSC.) 402(96))	Conducting Entity
Weekly Inspections (§4.1 and §6.1)	Shipboard personnel under the direction of a senior ship's officer in accordance with the maintenance manual(s)

<sup>7</sup> W 03 / 2020

<sup>8</sup> W 28 / 2023

<sup>9</sup> W 28 / 2023

<sup>10</sup> W 03 / 2020 (Entire Section)

Monthly Inspections (§4.1 and §6.1)	Shipboard personnel under the direction of a senior ship's officer in accordance with the maintenance manual(s)
Routine Maintenance as specified in the equipment maintenance manual (§4.1 and §6.1)	Authorized service provider or shipboard personnel under the direction of a senior ship's officer in accordance with the maintenance manual(s)
Annual thorough examination and operational test (§4.2 and §6.2)	Certified personnel of either the manufacturer or an authorized service provider. The service provider may be the ship operator, if authorized under §3 and §7
Five-year thorough examination, any overhaul, overload operational tests (§4.3 and §6.3)	Certified personnel of either the manufacturer or an authorized service provider in attendance of RO Surveyor. (See MSC.1/Circ. 1618.)

The setting and maintenance of release gear are critical operations with regard to maintaining the safe operation of lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and davit launched liferafts. Utmost care shall be taken when carrying out all inspection and maintenance operations on the equipment.

No maintenance or adjustment of the release gear shall be undertaken while the hooks are under load.


A statement confirming that lifeboat arrangements remain fit for purpose must be promptly issued by the manufacturer or authorized service provider that conducted the maintenance work. The statement must include any relevant, valid documents of certification and authorization.

The relevant maintenance manuals and associated technical documentation developed by the manufacturer must be kept up-to-date and available on board. (Reference MSC.1/Circ.1205/Rev.1 for developing operation and maintenance manuals for lifeboat systems.)

### 1.5. Maintenance Guidelines<sup>11</sup>

- Weekly and monthly inspections shall be conducted by shipboard personnel (3<sup>rd</sup> Officer/3<sup>rd</sup> Engineer or an officer as assigned by master) under the direction of a senior officer (Chief Officer/2nd Engineer).
- Any inspection, maintenance, thorough examination, operational testing, overhaul and repair shall be carried out according to the maintenance manuals and associated technical documentation developed by the manufacturer.
- Annual thorough examinations and operational tests, five-year thorough examination, overload operational tests shall be conducted by certified personnel from either the manufacturer or an authorized service provider.

<sup>11</sup> W 03 / 2020 (Entire Section)

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- Authorized service provider is an entity authorized by the flag administration (or its recognized organizations, ROs).
- The authorization shall be limited to each make and type of equipment to be serviced. Flag administrations (or their ROs) will issue the authorization document and ensure that information regarding authorized service providers is made available.
- Whenever work required by an authorized service provider is carried out, ensure the following is received:
  - Service report.
  - Personnel certificate.
  - IACS Approved Service Suppliers (AoSS) certificate proving compliance for the make and type of the on-board equipment.
- All reports and checklists must be completed and signed by the person carrying out the inspection and maintenance work and countersigned by the Company's representative or ship's Master.
- If attending service personnel do not have a certificate stating that he/she is approved to perform service of the life-saving appliances on board, Class may not accept the service carried out.
- Records of maintenance, thorough examination, operational testing, overhaul and repair shall be updated and filed on board the ship for the service life of the equipment as per the company filing system.

## 2. FIRE FIGHTING EQUIPMENT TESTING, INSPECTIONS AND SERVICE

**Red colour** within table below indicates that testing to be performed by an accredited service company only.

**Blue colour** stands for inspection may be carried out by competent crew members who have completed an advanced fire-fighting training course.

Appliance	Annual	2 – Year	3 – Year	5 – Year	10 – Year
<b>Marine Portable Fire Extinguishers</b>	Annual service & Inspections (A 23/Res.951 Sec. 9 Table 9.1.3)			Inspection (A 23/Res.951 Sec. 9 Table 9.1.3) At least one extinguisher of each type manufactured in the same year and kept on board a ship should be test discharged at five yearly intervals (as part of a fire drill).	Hydrostatic test (A 23/Res.951 Sec. 9 Table 9.1.3)
<b>Wheeled (mobile) fire extinguishers</b>	Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7.12)			Visually examine at least one extinguisher of each type manufactured in the same year and kept on board. (MSC.1/Circ. 1432 Sec. 9.6)	Hydrostatic test ((MSC.1/Circ.14 32 Sec. 10.5)
<b>Fixed dry chemical powder systems</b>	Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7.9)	As per (MSC.1/Circ. 1432 Sec. 8.2)			Hydrostatic test ((MSC.1/Circ.14 32 Sec. 10.3)
<b>Water mist, water spray and sprinkler systems</b>	Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7.5)			Service & Inspections (MSC.1/Circ. 1432 Sec. 9.3)	Hydrostatic test ((MSC.1/Circ.14 32 Sec. 10.2)
<b>Self-Contained Breathing Apparatus (SCBA)</b>	Check breathing apparatus air recharging systems, if fitted, for air quality Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7.8)			Hydrostatic testing for all SCBA's cylinders (MSC.1/Circ. 1432 Sec. 9.4)	


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Appliance	Annual	2 – Year	3 – Year	5 – Year	10 – Year
<b>EEBD</b>	Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7.8)			Hydrostatic testing is not required as per MPA.  For MARSHALL ISLAND flag , hydrostatic testing must be carried out at intervals not exceeding five years	
<b>Foam concentrate analysis / Portable foam applicator</b>	Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7.11)			As per MSC.1/Circ.143 2 / 7.11 (Depending on type of foam)	As per MSC.1/Circ.143 2 / 7.11 (Depending on type of foam)
<b>Medical Oxygen Cylinders /Oxygen Resuscitator (SINGAPORE FLAG VESSELS)<sup>12</sup></b>	Contents check at least annually. To be sent ashore if needs to be refilled			Hydrostatic testing is not required as per Singapore <sup>13</sup> flag. Please follow Manufacturers requirements regarding Hydrostatic test <sup>14</sup>	

<sup>12</sup> W 01 / 2020

<sup>13</sup> W 01 / 2020

<sup>14</sup> W 11 / 2019

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Appliance	Annual	2 – Year	3 – Year	5 – Year	10 – Year
<b>Medical Oxygen Cylinders / Oxygen Resuscitator (MARSHALL ISLAND FLAG VESSELS)<sup>15</sup></b>	The contents of the cylinders must be checked and changed as required by the manufacturer's instructions. <sup>16</sup> The entire system is to be inspected annually by a competent person in accordance with manufacturer's instructions. To be sent ashore if needs to be refilled <sup>17</sup>			The cylinders are to be hydrostatically tested every five years, or at an interval specified by the manufacturer, whichever occurs sooner. <sup>18</sup>	
<b>Galley and deep fat cooking fire-extinguishing systems</b>	Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7.13)				
<b>Fixed CO<sub>2</sub> System</b>	Annual service & Inspections (MSC.1/Circ.131 8 Sec. 5)	At each intermediate, periodical or renewal survey, Cylinders and systems thorough inspection and weighing (MSC.1/Circ.131 8 Sec. 6)		5-year tests as per (MSC.1/Circ.131 8 Sec. 6)	Hydrostatic test (MSC.1/Circ.131 8 Sec. 6)

<sup>15</sup> W 01 / 2020

<sup>16</sup> W 42 / 2022

<sup>17</sup> W 01 / 2020

<sup>18</sup> W 01 / 2020

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Appliance	Annual	2 – Year	3 – Year	5 – Year	10 – Year
<b>Miscellaneous -</b> <b>Fire mains, fire pumps, hydrants, hoses and nozzles</b> - Fixed fire detection and fire alarm systems - Ventilation systems and fire dampers - Fire doors	Annual service & Inspections (MSC.1/Circ.143 2 Sec. 7)				

### 3. LIFE SAVING EQUIPMENT TESTING, INSPECTIONS AND SERVICE<sup>19</sup>

**Red colour** within table below indicates that testing to be performed by an accredited service company only.

**Blue colour** stands for inspection may be carried out by crew members.

	Annual	2 – Year	3 – Year	5 – Year	10 – Year
<b>Lifeboats Launching Appliances</b>	Dynamic test of the winch-brake; (SOLAS III/20.11.1.3) operational test of on-load release gear incl. free-fall lifeboat release system (SOLAS III/20.11.2.2)			Dynamic test of the winch-brake under load; (SOLAS III/20.11.1.3) operational test of on-load release gear incl. free-fall lifeboat release system and when overhauling. (SOLAS III/20.11.2.3) Replace wire falls (SOLAS III/20.11.2.2)	
<b>Liferafts (Survitec extended packing service, 30 months)</b>	Annual onboard inspection using the kit, within 12 months from last service	Annual onboard inspection using the kit, within 12 months from last inspection. Exchange liferafts before 30 months interval from last service			
<b>Davit-launched liferaft automatic release hooks</b>	Thorough examination and operational test during the annual surveys (SOLAS III/20.11.3.2)			Operational test under load and when automatic release hook is overhauled (SOLAS III/20.11.3.3)	
<b>Immersion Suits and Anti-Exposure Suits</b>	Air pressure test of seams and closures for suits over ten years of age (MSC/Circ.1114)		Air pressure test of seams and closures every three years for suits up to ten years of age (MSC/Circ.1114)		
<b>Satellite EPIRBs</b>	12 months test for all aspects of operational efficiency (SOLAS IV/15.9.1)			Maintenance at intervals not exceeding five years (SOLAS IV/15.9.2)	

<sup>19</sup> W 04 / 2020 (Entire Section)