MANUFACTURER SERVICING GUIDELINE (ACCORDING TO IMO CIRCULAR MSC.1/CIRC.1432 OF 31 MAY 2012) MED APPROVED TROLLEY FIRE EXTINGUISHERS

TYPE: Trolley Extinguishers FUNCTIONING: Cartridge Operated / Auxiliary Pressure EXTINGUISHING AGENT: Dry Powder, Water, Water + Additive, Foam

The maintenance programme of the mobile / trolley extinguishers is articulated around the following phases at the indicated timings:

- Monthly inspection
- Annual inspection
- Quinquennial (5 years) inspection
- Decennial (10 years) inspection

In addition to the above, the following phase may be also considered:

• Inspection at recharge or in case of use of the device - in this case, please follow the indication as stated in QUINQUENNIAL (5 YEARS) INSPECTION paragraph.



MONTHLY INSPECTION - acc. to circular MSC.1/CIRC. 1432 of 31st May 2012, par. 5.9

The following verifications, inspections and controls must be performed at intervals not exceeding one (1) month, by duly trained and informed crew members or by an authorized company:

- 1) the extinguisher must be clearly visible, immediately usable and the access to it must be free of obstacles;
- 2) the extinguisher must not have been used or operated:
- 3) the extinguisher must not be visibly damaged, especially the safety device must not be damaged or lacking in order to avoid accidental actuation;
- 4) the distinctive signs must be visible and correctly readable:
- 5) the extinguisher sticker / label but be correctly present and readable;



ANNUAL INSPECTION - acc. to circular MSC.1/CIRC. 1432 of 31st May 2012, par. 7.12

The following verifications, inspections and controls must be performed at intervals not exceeding one (1) year, by duly trained and informed crew members or by an authorized company:

- 1) all the verifications stated for the monthly inspection;
- 2) the extinguisher must not present anomalies such as obstructed nozzle, leaks, traces of corrosion, dents, damages, disconnections or cracks of the flexible tubes, etc.;
- 3) the extinguisher must be exempt of damages on the supporting structures and on the transport handle;
- 4) the external cartridge filling must be checked by weighing method, comparing the value of the weight of it (cylinder and valve, without other connections) with the tare weight which is indicated in the cylinder marking:
- 5) the date for the next hydrostatic test to be done in the cylinder must not have been passed;
- 6) the fire extinguisher (if powder type) must be inverted to ensure that the dry powder contained in it is properly agitated, in case of water, water + additive or foam fire extinguisher, the complete substitution of the extinguishing agent, taking care to keep the correct filling tolerances (see following TABLE 1) is warmly recommended;

In case of empty fire extinguisher or if the registered weight of the external cartridge is 10% (or more) inferior to the tare weight indicated on the cylinder marking, the fire extinguisher as well as the cartridge must be re - filled. Before the refilling of the external cartrdige it is necessary to make a hydro test to the cartridge vessel, in order to check the stability of it and avoid the presence of leakages. The hydro test must be done at a minimum value of 250 bar, please refer to the indication stated in the following paragraph "decennial inspection - hydro test".

All the eventual anomalies must be immediately eliminated. In case it is not possible to eliminate them, the device must be considered out of order and substituted.

Note: Always be sure to empty the external cartridge before dismounting the valve in order to avoid risks.



QUINQUENNIAL (5 YEARS) INSPECTION acc. to circular MSC.1/CIRC. 1432 of 31st May 2012, par. 9.6

The following verifications, inspections and controls must be performed at intervals not exceeding five (5)



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MANUFACTURER SERVICING GUIDELINE

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MANUFACTURER SERVICING GUIDELINE (ACCORDING TO IMO RESOLUTION A.951(23) OF 5 DECEMBER 2003) MED APPROVED PORTABLE FIRE EXTINGUISHERS

years, with a maximum tolerance allowed of one (1) month, by duly trained and informed crew members or by an authorized company:

- 1) verifications as stated above for the monthly and annual control;
- 2) internal examination of the extinguisher for the verification of its good state of conservation, and in order to avoid the presence of corrosion and lining deterioration;
- 3) examination and functional control of all parts:
- 4) control of all sections of outlet of the auxiliary gas and of the extinguishing agent, particularly the dip tube, the hose, the connections and nozzles, in order to verify that they are free of any occlusion;
- 5) eventual restoration of the surface protection;
- 6) substitution of all the safety devices (the substitution of all the o - rings is also warmly recommended);
- 7) substitution of the external cartridge valve (the substitution of all the o - rings, if present, is also warmly recommended);
- 8) complete substitution of the extinguishing agent, taking care to keep the correct filling tolerances (see following TABLE 1);
- 9) assembly of the extinguisher in perfect state of efficiency;

F.E. AGENT	ALLOWED % FILLING TOLERANCE
POWDER	± 2
WATER BASED	0 / - 5%
CO ₂	0 / - 5%

TABLE 1 - FILLING TOLERANCES FOR TROLLEY F.E. (as per EN1866 - 1, par. 6.2.2)

IMPORTANT NOTICE: please ensure not to overload the CO2 external cartridge, only a negative loading tolerance is allowed for such equipment. This is mostly important in order to avoid risks of overpressure of the device due to thermal modifications!



QUINQUENNIAL (10 YEARS) INSPECTION acc. to circular MSC.1/CIRC. 1432 of 31st May 2012, par. 10,5

The following verifications, inspections and controls must be performed at intervals not exceeding five (10) years, with a maximum tolerance allowed of one (1) month, by an authorized company.

- The fire extinguisher vessel must be submitted to a hydro test, at a value of 1,5 times the WP stated by the manufacturer, one-minute-long, to check the stability of the vessel;
- The external cartridge vessel must be submitted to a hydro test, at a value of 250 bar, one-minute-long, to check the stability of the vessel;
- Complete substitution of the extinguishing agent, taking care to keep the correct filling tolerances (see TABLE 1);
- Assembly of the extinguisher in perfect state of efficiency

IMPORTANT NOTICE / ADVISE FOR A CORRECT ASSEMBLY AND SERVICING PROCEDURE

- Do not use any oil or lubricant during the valve re assembly. The use of oil or lubricant could modify the elasticity and chemical property of the material used for gaskets / o- rings and also create powder caking and lumping or other effects on the foam agents if inadvertently put in contact with the extinguishing agent;
- Please ensure to close and screw the valve on the cylinder using the correct strength and using a torque wrench. Please refer to the manufacturer's indication about the correct torque strength to be used for the different types:
- During the guinguennial intervention, the substitution of all the o - rings is also warmly recommended;
- During the guinguennial intervention, the substitution of the external cartridge valve is compulsory, since the valve removal could led to damages to the valve thread;
- The substitution of a part or component (included the extinguishing agent) must be done only with original spare parts, according to the tested and approved prototype. In case of any doubt, please refer to the fire extinguisher's manufacturer
- Records of inspection should be maintained. The records should show the date of inspection, the type of maintenance carried out and whether a pressure test was performed.



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