

Subject

Maintenance, inspection and tests of Fire-Protection Systems and Appliances (including air cylinders of a self-contained air support system in fire-protected lifeboats) on board the Panama-registered ships

ClassNK

Technical Information

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To whom it may concern

The Panama Government has informed ClassNK of Merchant Marine Circular No. 122, "Guidelines for the Maintenance and Inspection of Fire-Protection Systems and Appliances", which is in reference to maintenance, inspection and tests of Fire-Protection System and Appliances (including air cylinders of a self-contained air support system in fire-protected lifeboats) on board the Panama- registered ships. The essential points of the Guidelines together with provisional measures in relation to hydraulic tests are shown below. The previous ClassNK Technical Information No. TEC-0486 is now superseded. For your convenience, partial amendments to the original text of the Guidelines are made, which is available on Panama Government Internet Homepage (<http://www.segumar.com>).

1. General

- (1) All fire protection systems and appliances (including air cylinders of a self-contained air support system in fire-protected lifeboats) shall at all times be in good order and available for immediate use while the ship is in service.
- (2) "A service agent or facility" described below means one be subject to approval by the Administration or IACS members or equal Organizations to perform maintenance, inspection and tests of fire-protection systems and appliances.
- (3) All self-contained breathing apparatus (SCBA's) means one for fire-fighter's outfit and for safety equipment specified in IBC/IGC Code and air cylinders of a self-contained air support system in fire-protected lifeboats.

2. Provisional measurements of hydraulic tests

- (1) For all ships that have portable fire extinguishers (more than 10 years from the date of manufacture) / self-contained breathing apparatus (more than 5 years from the date of manufacture) / fixed CO₂ gas cylinders (20 years from the date of manufacture and every 10 years thereafter) due already for hydraulic tests during the first SE Surveys (including SE(OS)) on and after 1 April 2003. ClassNK will issue a SE Certificate with "NOTE" (Example) below saying that hydraulic tests should be carried out by the next scheduled dry-docking. It means that the hydraulic tests are allowed to carry out at the next scheduled dry-docking which occurs hereinafter, not at the time of SE Surveys. In this case, the validity of the SE Permanent (Final) Certificate is the date of the next scheduled dry-docking or one of the next SE (RS), whichever is the earlier. Where the next scheduled dry-docking is planned after the next SE (RS), the "NOTE" should become taken over at the SE (RS).

(To be continued)

NOTES:

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“NOTE” (Example: The next SE Survey date is 7 May 2004, the next scheduled dry-docking date is 10 March 2005)

Hydraulic tests of portable fire extinguishers* / self-contained breathing apparatus* including air cylinders of a self-contained air support system in fire-protected lifeboats* / fixed CO₂ gas cylinders* should be carried out by the next scheduled dry-docking, 10 March 2005. (Special requirements of the Panama Government)

*Delete as appropriate.

- (2) For ships that ClassNK already issued SE Certificates with “NOTE” in accordance with the previous special requirements related to hydraulic tests (portable fire extinguishers: more than 5 years from the date of manufacture, fixed CO₂ gas cylinders: 20 years from the date of manufacture and every 5 years thereafter), ClassNK will partially amend or delete the previous “NOTE” where necessary in accordance with the requirements of this Information after confirmation of the date of manufacture of portable fire extinguishers, etc., during the first SE Surveys (including SE (OS)) on and after 1 April 2003.
3. Application
This “Guidelines” applies to all ships.
4. Maintenance and testing
Instructions for on-board maintenance, not necessarily by the ship’s crew, and testing of active and passive fire protection systems and appliances shall be easily understood, illustrated wherever possible, and, as appropriate, shall include the following for each system or appliance:
 - (1) maintenance and repair instructions;
 - (2) schedule of periodic maintenance;
 - (3) list of replaceable parts; and
 - (4) log for records of inspections and maintenance, listing identified non-conformities and their targeted completion dates.
5. Weekly testing and inspections
 - (1) All public address systems and general alarm systems are functioning properly; and
 - (2) Breathing apparatus cylinders do not present leakages.
6. Monthly testing and inspections
 - (1) All fire-fighter’s outfits, fire extinguishers, fire hydrants, hose and nozzles are in place, properly arranged, and are in proper condition;
 - (2) All fixed fire-fighting system stop valves are in the proper open or closed position, dry pipe sprinkler systems have appropriate pressures as indicated by gauges;
 - (3) Sprinkler system pressure tanks have correct levels of water as indicated by glass gauges;
 - (4) All sprinkler system pumps automatically operate on reduction of pressure in the systems;
 - (5) All fire pumps are operated; and
 - (6) All fixed fire-extinguishing systems using extinguishing gas are free from leakage.

(To be continued)

7. Quarterly testing and inspections
 - (1) All automatic alarms for the sprinkler systems are tested using the test valves for each section;
 - (2) The international shore connection is in proper condition according to the specifications of the FSS Code;
 - (3) Lockers providing storage for fire-fighting equipment contain proper inventory and equipment is in proper condition;
 - (4) All fire doors and fire dampers are tested for local operation; and
 - (5) All CO₂ bottle connections for cable operating system clips shall be checked for tightness on fixed fire-extinguishing systems.
8. Annual testing and inspections
 - (1) All portable fire extinguishers are checked for proper location, charging pressure, and condition according to the ship's fire plan;
 - (2) Fire detection systems are tested for proper operation, as appropriate;
 - (3) All fire doors and dampers are tested for remote operation;
 - (4) All foam-water and water-spray fixed fire-extinguishing systems are tested for operation;
 - (5) All accessible components of fixed fire-extinguishing systems are visually inspected for proper condition;
 - (6) All fire pumps, including sprinkler system pumps, are flow tested for proper pressures and flows;
 - (7) All hydrants are tested for operation;
 - (8) All antifreeze systems are tested for proper solutions;
 - (9) Sprinkler system connections from the ship's fire main are tested for operation;
 - (10) All fire hoses are hydrostatically tested;
 - (11) All self-contained breathing apparatus including air cylinders of a self-contained air support system in fire-protected lifeboats should be checked for external condition and air recharging systems checked for air quality;
 - (12) An annual leakage test of fixed halon fire-extinguishing systems shall be carried out in accordance with MSC/Circ. 600. The chief engineer can carry out this test if provided with the proper equipment and training.
 - (13) Checks of portable fire extinguishers and SCBA's cylinders shall be carried out either by "a service agent or facility" or by a deck or engine officer trained and assigned to this duty.
9. Two-year service
 - (1) Portable fire extinguishers and SCBA's cylinders shall be checked by "a service agent or facility".
 - (2) Contents of fixed CO₂ gas fire-extinguishing systems shall be verified.
 - (3) Air shall be blown through the piping of fixed gas fire-extinguishing systems.
 - (4) Air shall be blown through the piping of fixed gas fire-extinguishing systems. The blow test shall be carried out by "a service agent or facility".

(To be continued)

10. Three-year service

- (1) The first periodical control of fixed foam fire-extinguishing systems and foam concentrates stored on board shall be performed after a period of 3 years (from the original installation date) and after that every year. A record of the age of the foam concentrates and of subsequent control should be kept on board readily available for inspection.
- (2) Above (1) periodical controls or analysis will be performed by an independent or manufacturer's laboratory. Tests, controls or analysis of foam will be performed as per MSC/Circ.582, MSC/Circ.670 and MSC/Circ.798.

11. Five-year service

- (1) Hydrostatic testing for all SCBA's cylinders including air cylinders of a self-contained air support system in fire-protected lifeboats.
- (2) Above (1) testing shall be carried out by "a service agent or facility". Test certificates must be provided and kept on board for inspections. Test date and pressure must be stamped or tag on each cylinder. This test shall not be carried on board.

12. Ten-year Service

- (1) Control valves of fixed fire-extinguishing systems shall be internally inspected.
- (2) Hydrostatic pressure test of portable fire extinguishers. Test certificates must be provided and kept on board for inspections. Test date and pressure must be tagged on each bottle. This test shall not be carried on board.
- (3) Above (1) and (2) inspection and test shall be carried out by "a service agent or facility".

13. Twenty-year Service

- (1) All (100%) CO₂ cylinders from the fixed fire-extinguishing systems shall be hydrostatically tested before 20 years from the date of manufacture and the pressure test shall then be completed every 10 years thereafter. Any percentage of CO₂ bottles can be hydrostatically tested at any interval of time but all (100%) shall be hydrostatically pressure tested no later than the datelines already established.
- (2) Above (1) test shall be carried out by "a service agent or facility". Test certificates must be provided and kept on board for inspections. Test date and pressure must be stamped on each bottle. This test shall not be carried on board.
- (3) Ships (20 years or older) coming into the Panama-registered ships will be required to carry this test at the next scheduled dry-docking.

For any questions about the above, please contact:

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