

CHAPTER 40

CHEMICAL FIRE SYSTEMS AND FIRE EXTINGUISHERS

40-1 GENERAL:-

There are two types of chemical fire fighting equipment on board - CO<sub>2</sub> (Carbon Dioxide) and Foamite.

40-2 CO<sub>2</sub> SYSTEM:-

The complete CO<sub>2</sub> system consists of two fifty-pound cylinders, with hose, reel and horn with remote control box.

One hose, reel and horn is located on Superstructure Deck at frame 14, port, with cable pull box mounted forward of vent. The CO<sub>2</sub> cylinders are on the Main Deck, in the galley.

One hose, reel and horn is located at frame 23 Superstructure Deck, port side, with cable pull box at frame 24; the cylinders are on upper level of engine room.

One complete system, hose, reel, horn and cylinders, is located and released in the engine room between frames 23-24 starboard.

40-3 FOAMITE SYSTEM:-

The foamite system is of the pressure operated type in which liquid foam is kept in a pressure-tight container and from which the only operation necessary to obtain foam is the opening of the water supply valve. The Aer-o-foam Pressure Proportioner Introduces Aer-o-foam liquid into the water stream under pressure, for delivery of the solution to the mechanical foam nozzle. When used with Mechanical Foam Nozzle, one original filling of both compartments (20 gallons) and one complete refill of both compartments (20 gallons) will produce 6480 to 7200 gallons of foam at the rate of 540 to 600 gallons per minute for approximately 12 minutes of operation. Each duplex pressure proportioner has one nozzle and ten 5 gallon charges of liquid; 6 charges for spare and 4 in the generator ready for immediate use.

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40-3 FOAMITE SYSTEM:-

Two generators are portable: one is located at frame 10 in the windlass room A-102AE with charges nearby; one is located at frame 27 in the boiler room, starboard, charges stowed nearby.

40-4 OPERATING INSTRUCTIONS - FOAMITE SYSTEM:-

- (a) Connect mechanical foam nozzle to the end of discharge hose. NOTE: Pick-up tube can be removed, as it is not needed.
- (b) Remove fill cap. Open two cans of liquid, using spike (which is built into under side of fill cap) to puncture hole in top of can to admit air. Pour both cans (10 gallons) into upper compartment and replace fill cap.
- (c) Open water valve.
- (d) Keep directional valve in vertical position. (Water then passes through without picking up foam liquid).
- (e) Start pump or open main water valve and wait until pressure gauge located on pressure proportioner registers 75 pounds or more. A pressure of 75 pounds or more on the proportioner is recommended for best results.
- (f) Throw directional valve to position marked Upper Compartment, and start timer. About 3 minutes are required to empty compartment.
- (g) While discharging and producing foam from upper compartment, remove fill cap, open and pour two cans of liquid into lower compartment as directed above. Replace fill cap.
- (h) When timer rings, throw directional valve to position marked Lower Compartment. Reset timer.

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40-4 OPERATING INSTRUCTIONS - FOAMITE SYSTEM:-

- (i) Remove upper drain cap and fill cap to empty upper compartment of water. When completely drained, replace drain cap, refill compartment as directed above, and replace fill cap.
- (j) Repeat same process as long as foam is desired.

Further information relative to the fire fighting system may be obtained from the Instruction Books.

40-5 HANDY-BILLY PUMPS:-

In addition to the fixed and portable foam generators, two handy-billy pumps with 5 gallon liquid charges and pick-up tubes are provided.

What is commonly called the handy billy is a positive displacement rotary pump. It is connected to a two-cylinder, two-cycle gasoline motor mounted on the same base.

A 2-inch suction hose is used for drawing water from over the side or for connection to a fire plug.

An S-type suction chamber used with a pick-up tube for the production of mechanical foam is attached. It weighs 106 pounds.

The handy billy can be carried to the location of a fire when the fire main has been damaged. And by means of S-type attachment and pick-up tube, it is a prompt means of producing mechanical foam when the situation warrants it. The liquid foam is stowed for this purpose in 5 gallon cans at frames 28-31, passage C-101AT, 10 charges for each pump.

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TABLE 40-1

40-6 PORTABLE CO<sub>2</sub> (15 Lb.) FIRE EXTINGUISHERS

QUANTITY	LOCATION	DECK	P/S	TYPE OF STOWAGE	REMARKS
1	Wheelhouse	Bridge	S	Clips	As directed.
1	Radar, Radio Chart Room	Super.	S	Clips	As directed.
1	Ramp Mach'y. Compt. A-102AE	Main	P	Clips	As directed.
1	Bow Door Mach'y. Compt. A-101EV	Main	S	Clips	As directed.
1	Galley A-104-1/2EL	Main	P	Clips	As directed.
1	Galley Stores A-104-1/2EL	Main	P	Clips	As directed.
1	Passage A-103-1/2L	Main	S	Clips	As directed.
1	General Workshop C-102 1/2AE	Main	P	Clips	As directed.
1	Boiler Room C-101 1/2E	Main	S	Clips	As directed.
1	Passage C-101AT	Main	S	Clips	As directed.
1	Eng's. Stores C-102A	Main	P	Clips	As directed.

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NOTE: 1

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TABLE 40-1 (cont'd.)

40-6 PORTABLE CO<sub>2</sub> (15 lb.) FIRE EXTINGUISHERS

QUANTITY	LOCATION	DECK	P/S	TYPE OF STOWAGE	REMARKS
1	Crew & Landing Force Berthing & Messing A-208L	Hold	Ø	Clips	As directed.
1	Officer's Berthing & Messing A-210L	Hold	S	Clips	As directed.
1	Crew's Berthing & Messing A-210L	Hold	P	Clips	As directed.
4	Engine Room B-1	Hold	P/S	Clips	As directed.
1	Landing Force Berthing C-201EL	Hold	Ø	Clips	As directed.
1	Steering Gear C-206E	Hold	Ø	Clips	As directed.

NOTE: For stowage of CO<sub>2</sub> 50 pound cylinders, see Dwg. No. 30010-1, Misc. Stowages, Sheet No. 1

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