STCW Code Section B-VI/1
Guidance regarding mandatory requirements for safety familiarization and basic training and instruction for all seafarers

Ref: https://www.edumaritime.net/stcw-code
Source: IMO

FIRE PREVENTION AND FIRE FIGHTING

1. The training in fire prevention and fire fighting required by section A-VI/1 should include at least the theoretical and practical elements itemized in paragraphs 2 to 4 hereunder.*

Theoretical training

2. The theoretical training should cover:
   1. the three elements of fire and explosion (the fire triangle): fuel; source of ignition; oxygen;
   2. ignition sources: chemical; biological; physical;
   3. flammable materials: flammability; ignition point; burning temperature; burning speed; thermal value; lower flammable limit (LFL); upper flammable limit (UFL); flammable range; inerting; static electricity; flashpoint; auto-ignition;
   4. fire hazard and spread of fire by radiation, convection and conduction;
   5. reactivity;
   6. classification of fires and applicable extinguishing agents;
   7. main causes of fire on board ships: oil leakage in engine-room; cigarettes; overheating (bearings); galley appliances (stoves, flues, fryers, hotplates, etc.); spontaneous ignition (cargo, wastes, etc.); hot work (welding, cutting, etc.); electrical apparatus (short circuit, non-professional repairs); reaction, self-heating and auto-ignition; arson; static electricity;
   8. fire prevention;
   9. fire- and smoke-detection systems; automatic fire alarms;
   10. fire-fighting equipment, including:
       1. fixed installations on board and their locations; fire mains, hydrants; international shore connection; smothering installations, carbon dioxide (CO2), foam; pressure water spray system in special category spaces, etc.; automatic sprinkler system; emergency fire pump; emergency generator; chemical powder applicants; general outline of required and available mobile apparatus; high-pressure fog system; high-expansion foam; new developments and equipment;
       2. firefighter’s outfit, personal equipment; breathing apparatus; resuscitation apparatus; smoke helmet or mask; fireproof lifeline and harness; and their location on board; and
       3. general equipment, including fire hoses, nozzles, connections, fire axes; portable fire extinguishers; fire blankets;
11. construction and arrangements, including escape routes; means for gas-freeing tanks; 
   Class A, B and C divisions; inert gas systems; 
12. ship fire-fighting organization, including general alarm; fire control plans, muster 
   stations and duties of individuals; communications, including ship–shore when in port; 
   personnel safety procedures; periodic shipboard drills; patrol systems; 
13. practical knowledge of resuscitation methods; 
14. fire-fighting methods, including sounding the alarm; locating and isolating; jettisoning; 
   inhibiting; cooling; smothering; extinguishing; reflash watch; smoke extraction; and 
15. fire-fighting agents, including water, solid jet, spray, fog, flooding; high-, medium- and 
   low-expansion foam; carbon dioxide (CO2); aqueous-film-forming foam (AFFF); dry 
   chemical powder; new developments and equipment.

Practical training

3. The practical training given below should take place in spaces which provide truly realistic 
   training conditions (e.g., simulated shipboard conditions), and whenever possible and practical 
   should also be carried out in darkness as well as by daylight and should allow the trainees to 
   acquire the ability to: 
   1. use various types of portable fire extinguishers; 
   2. use self-contained breathing apparatus; 
   3. extinguish smaller fires, e.g., electrical fires, oil fires and propane fires; 
   4. extinguish extensive fires with water (jet and spray nozzles); 
   5. extinguish fires with either foam, powder or any other suitable chemical agent; 
   6. enter and pass through, with lifeline but without breathing apparatus, a 
      compartment into which high-expansion foam has been injected; 
   7. fight fire in smoke-filled enclosed spaces, wearing self-contained breathing apparatus; 
   8. extinguish fire with water fog or any other suitable fire-fighting agent in an 
      accommodation room or simulated engine-room with fire and heavy smoke; 
   9. extinguish an oil fire with fog applicator and spray nozzles; dry chemical powder or foam 
      applicators; and 
   10. effect a rescue in a smoke-filled space, wearing breathing apparatus.

General

4. Trainees should also be made aware of the necessity of maintaining a state of readiness on 
   board.

ELEMENTARY FIRST AID*

5. The training in elementary first aid required by regulation VI/1 as part of the basic training 
   should be given at an early stage in vocational training, preferably during pre-sea training, to 
   enable seafarers to take immediate action upon encountering an accident or other medical 
   emergency until the arrival of a person with first-aid skills or the person in charge of medical 
   care on board.
PERSONAL SAFETY AND SOCIAL RESPONSIBILITIES*

6. Administrations should bear in mind the significance of communication and language skills in maintaining safety of life and property at sea and in preventing marine pollution. Given the international character of the maritime industry, the reliance on voice communications from ship to ship and from ship-to-shore, the increasing use of multinational crews, and the concern that crew members should be able to communicate with passengers in an emergency, adoption of a common language for maritime communications would promote safe practice by reducing the risk of human error in communicating essential information.

7. Although not universal, by common practice English is rapidly becoming the standard language of communication for maritime safety purposes, partly as a result of the use of the IMO Standard Marine Communication Phrases.

8. Administrations should consider the benefits of ensuring that seafarers have an ability to use at least an elementary English vocabulary, with an emphasis on nautical terms and situations.

*The relevant IMO Model Course(s) may be of assistance in the preparation of courses.*

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