§ 28.380 General structural fire protection.

(a) Fire hazards to be minimized. Each vessel must be constructed so as to minimize fire hazards insofar as is reasonable and practicable.

(b) Combustibles insulated from heated surfaces. An internal combustion engine exhaust, galley uptake, electrical heating tape, or similar source of ignition must be kept clear of and suitably insulated from combustible material. A dry exhaust system for an internal combustion engine on a wooden or fiber reinforced plastic vessel must be installed in accordance with ABYC P–1.

(c) Separation of machinery and fuel tank spaces from accommodation spaces.

(1) Each accommodation space must be separated from machinery and fuel tank spaces by a fire resistant boundary which will prevent the passage of vapors.

(2) Each pipe and cable penetration between an accommodation space and a machinery or a fuel tank storage space must be sealed.

(d) Paint and flammable liquid lockers. Each vessel carrying paint and flammable liquids must be equipped with a steel or a steel lined storage locker.
(e) **Insulation.** Except as provided in paragraphs (e)(1) and (e)(2) of this section, insulation must be noncombustible.

(1) In machinery spaces, combustible insulation may be used for pipe and machinery lagging.

(2) In cargo spaces and refrigerated compartments of service spaces, combustible insulation may be used.

(f) **Vapor barrier.** Where insulation of any type is used in spaces where flammable and combustible liquids or vapors are present, e.g., machinery spaces and paint lockers, a vapor barrier which covers the insulation must be provided.

(g) **Paint.** Nitrocellulose or other highly flammable or noxious fume producing paints or lacquers must not be used on the vessel.

(h) **Mattresses.** Polyurethane foam mattresses are prohibited.


(i) **Fiber reinforced plastic.** When the hull, a deck, deckhouse, or superstructure of a vessel is partially or completely constructed of fiber reinforced plastic, the resin used must be fire retardant.

(j) **Cooking areas.** Vertical or horizontal surfaces within 0.9144 meters (3 feet) of cooking appliances must be composed of noncombustible material or covered by noncombustible material. Curtains, draperies, or free hanging fabrics are not permitted within 0.9144 meters (3 feet) of cooking appliances.

§ 28.385 Structural fire protection for vessels that operate with more than 49 individuals on board.

(a) **Applicability.** Each vessel that operates with more than 49 individuals on board must comply with the requirements of this section in addition to the requirements of §28.380.

(b) **Construction.** The hull, structural bulkheads, columns and stanchions must be composed of steel. Superstructures and deckhouses must be constructed of noncombustible material.

(c) **Protection of accommodation spaces.** A bulkhead or deck separating an accommodation space from a control station, machinery space, cargo space, or service space must be constructed of noncombustible material.

§ 28.390 Means of escape.

(a) Each space which is used by an individual on a regular basis or which is generally accessible to an individual must have at least two widely separated means of escape. At least one of the means of escape must be independent of watertight doors. Subject to the restrictions of this section, means of escape include normal exits and emergency exits, passageways, stairways, ladders, deck scuttles, and windows.

(b) At least one of the means of escape from each space must provide a satisfactory route to weather.

(c) Each door, hatch or scuttle used as a means of escape must be capable of being opened by one individual, from either side, in both light and dark conditions, must open towards the expected direction of escape from the space served, and if a watertight door be of the quick acting type.

(d) Each deck scuttle which serves as a means of escape, must be fitted with a quick-acting release and a device to hold the scuttle in an open position.

(e) Each foothold, handhold, ladder, or similar structure, provided to aid escape, must be suitable for use in emergency conditions and must be of rigid construction.

(f) A window or windshield of sufficient size and proper accessibility may be used as one of the required means of escape from an enclosed space.

§ 28.395 Embarkation stations.

Each vessel must have at least one designated survival craft embarkation station and any additional embarkation stations necessary so that an