

CFSAC REGULATORY REFORM SUBCOMMITTEE RECOMMENDATION REPORT

SUBJECT: EVALUATION OF EXISTING COAST GUARD REGULATIONS, GUIDANCE DOCUMENTS, INTERPRETATIVE DOCUMENTS, AND COLLECTIONS OF INFORMATION

IDENTIFICATION DETAILS OF REGUALTION, GUIDANCE OR INFORMATION COLLECTION (BY SECTION, PARAGRAPH, SENTENCE, CLAUSE, ETC.):

- Existing regulation
- Proposed regulation
- Guidance
- Collection of information

46 CFR §28.160 Portable fire extinguishers.

ADVICE AND RECOMMENDATIONS:

- Repeal
- Replace
- Modification

Discussion: The USCG recently updated marine portable fire extinguisher carriage requirements utilizing standard classification that is used by non-marine industry.

The old carriage requirements were:

TABLE 28.160—PORTABLE FIRE EXTINGUISHERS FOR VESSELS 65 FEET (19.8 METERS) OR MORE IN LENGTH

Space	Classification	Quantity and location
Safety areas, communicating corridors	A-II	1 in each main corridor not more than 150 feet (49.2 meters) apart. (May be located in stairways.)
Pilothouse	C-I	2 in vicinity of exit.
Service spaces, galleys	B-II or C-II	1 for each 2,500 square feet (269.1 sq. meters) or fraction thereof suitable for hazards involved.
Paint lockers	B-II	1 outside space in vicinity of exit.

TABLE 28.160—PORTABLE FIRE EXTINGUISHERS FOR VESSELS 65 FEET (19.8 METERS) OR MORE IN LENGTH—Continued

Space	Classification	Quantity and location
Accessible baggage and storerooms	A-II	1 for each 2,500 square feet (269.1 sq. meters) or fraction thereof located in the vicinity of exits, either inside or outside the spaces.
Work shops and similar spaces	A-II	1 outside the space in vicinity of exit.
Machinery spaces; Internal combustion propelling machinery.	B-II	1 for each 1,000 brake horsepower or fraction thereof but not less than 2 nor more than 6.
Electric propulsion motors or generator unit of open type.	C-II	1 for each propulsion motor generator unit.
Auxiliary spaces	B-II	1 outside the space in the vicinity of exit.
Internal combustion machinery	B-II	1 outside the space in the vicinity of exit.
Electric emergency motors or generators	C-II	1 outside the space in the vicinity of exit.

[CGD 88-079, 56 FR 40393, Aug. 14, 1991; 56 FR 47679, Sept. 20, 1991]

The new carriage requirements are:

TABLE 28.160 - PORTABLE FIRE EXTINGUISHERS FOR VESSELS 65 FEET (19.8 METERS) OR MORE IN LENGTH

Space	Minimum required rating	Quantity and location
Safety areas, communicating corridors	2-A	1 in each main corridor not more than 150 ft (45.7m) apart. (May be located in stairways.)
Pilothouse	20-B:C	2 in the vicinity of the exit.
Service spaces, galleys	40-B:C	1 for each 2,500 sq ft (232.2 sq m) or fraction thereof suitable for hazards involved.
Paint lockers	40-B	1 outside space in the vicinity of the exit.
Accessible baggage and storerooms	2-A	1 for each 2,500 sq ft (232.2 sq m) or fraction thereof located in the vicinity of the exits, either inside or outside the spaces.
Workshops and similar spaces	2-A	1 outside the space in the vicinity of the exit.

Machinery spaces; Internal combustion propelling machinery	40-B:C	1 for each 1,000 brake horsepower or fraction thereof but not fewer than 2 or more than 6.
Electric propulsion motors or generator unit of open type	40-B:C	1 for each propulsion motor generator unit.
Auxiliary spaces	40-B:C	1 outside the space in the vicinity of the exit.
Internal combustion machinery	40-B:C	1 outside the space in the vicinity of the exit.
Electric emergency motors or generators	40-B:C	1 outside the space in the vicinity of the exit.

Under the old carriage requirements, C-I classified extinguishers satisfied the Pilothouse carriage requirements. Many mariners complied with the regulations utilizing liquefied gas type fire extinguishers or carbon dioxide fire extinguishers because of their low residue properties appropriate for use around critical electronics in the pilothouse of a vessel. These electronics are used in all manner of vessel control, systems and area monitoring, situational monitors such as radar and depth sounder and in the communications equipment. Carriage of the liquefied gas type or carbon dioxide fire extinguishers in the pilot house reduce the risk to all this vital equipment compared to carrying other types of extinguishing agent. Dry chemical extinguishing agent is corrosive and its presents is a hazard to electronic equipment.

Under the old carriage requirements, classification B-II portable extinguishers satisfied regulations for, and were appropriate for the hazard of, internal combustion machinery spaces. Classification C-II portable extinguishers satisfied regulations for, and were appropriate for the hazards of, electric generator and / or motor space. Many mariners complied with the carriage requirements for these machinery spaces utilizing portable carbon dioxide fire extinguishers. These extinguishers are appropriate for these machinery spaces because of their low residue properties, their 'under the floorboards capabilities, the capability to pull the pin, lock the discharge mechanism in the discharge position and 'throw it in', and allowing the capability to stop a runaway internal combustion engines by replacing the air the engine is taking in with carbon dioxide and disrupting the combustion process.



According to the new carriage requirements, a minimum required rating of 20-B:C is necessary in the pilothouse. Neither the 5lb. liquefied gas extinguisher or the 15 lb. or 20 lb. carbon dioxide extinguisher meets the updated requirements. These extinguishers are rated as a 10-B:C under this classification but have been the most appropriate for use in the pilothouses of vessels for many years.

According to the new carriage requirements portable fire extinguishers with a classification of 40-B:C are needed for machinery spaces. The 15 lb. and 20 lb. carbon dioxide portable extinguishers, are perfectly appropriate for these machinery spaces but are classified as 10-B:C under the new classification. The carbon dioxide extinguishers no longer meet USCG updated carriage requirements.

The new regulations are causing vessels to carry portable dry chemical extinguishers in machinery spaces where they may not be appropriate and in fact may be unnecessarily risking introducing a hazard into the vessel environment that would be hazardous to critical vessel systems. It is the recommendation of this committee that the USCG review their carriage requirements and modify them so that they allow the liquefied gas

type and carbon dioxide type portable fire extinguishers where a B, C or B:C type extinguisher is appropriate.

IF MODIFICATION - SPECIFIC RECOMMENDATIONS FOR HOW THE REGULATION, GUIDANCE, OR INFORMATION COLLECTION SHOULD BE MODIFIED:

Marine portable fire extinguisher carriage regulations should have appropriate minimum required ratings for liquefied gas type extinguishers or carbon dioxide extinguishers for machinery spaces where a C or B:C extinguisher is appropriate.

HOW AND TO WHAT EXTENT REPEAL, REPLACEMENT OR MODIFICATION WILL REDUCE COSTS OR BURDENS TO INDUSTRY:

Types of costs – mark all that apply

- Costs that are outdated or are no longer necessary
- Costs which are no longer enforced as written or which are ineffective
- Costs tied to reporting or recordkeeping requirements that impose burdens that exceed benefits (explain why the reporting or recordkeeping requirement is overly burdensome, unnecessary, or how it could be modified)

The requirement modifications made while switching from the old marine rating system to the new universal classification system did not ensure that all types of extinguishing agents appropriate for the hazard and of appropriate size for the space were included in the amended minimum required rating. Vessel operators are mounting dry chemical extinguishers in the engine room and pilot house at the risk of critical electronic equipment to satisfy requirements while carrying additional USCG approved portable extinguishers of the liquefied gas type and carbon dioxide type to use in case of fire.

THE EXTENT TO WHICH RISKS TO HEALTH OR SAFETY WOULD LIKELY INCREASE:

None.

HOW AND TO WHAT EXTENT THE REGULATION, GUIDANCE, OR INFORMATION COLLECTION HAS LED TO THE ELIMINATION OF JOBS OR INHIBITS JOB CREATION:

N/a

PROVIDE QUANTITATIVE AND/OR QUALITATIVE DATA TO SUPPORT AND ILLUSTRATE THE IMPACT, COST, OR BURDEN, AS APPLICABLE. IF THE DATA IS NOT READILY AVAILABLE INCLUDE INFORMATION AS TO HOW SUCH INFORMATION CAN BE OBTAINED BY THE COMMITTEE OR THE COAST GUARD

The USCG marine portable fire extinguisher classification data for USCG approved equipment is not readily available because it is kept in UL[®] databases. The availability of this data is very limited, especially compared to the ability to access and sort data through the CGMIX searchable listings of equipment and materials approved or certified by the US Coast Guard for use on commercial vessels and recreational boats. The UL[®] performs equipment testing for portable fire extinguishers and other services for the Coast Guard but portable fire equipment data should be kept in the CGMIX databases. This would allow the USCG, researchers and the public to have the ability to access and sort portable fire extinguisher data through the CGMIX searchable listings of equipment and materials approved or certified by the US Coast Guard like other approved or certified equipment.

A complete analysis should be completed to compare all fire extinguishers of varying agent type and size that were approved and appropriate under the old marine classification system, 46 CFR 28.160, to the fire extinguishers available under the revised classification system.