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United States Coast Guard

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16711
CG-CVC Policy Letter
16-01

JAN 13 2016

From: Kyle P. McAvoy, CAPT
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To: Distribution

Subj: RECOMMENDED PRACTICES FOR CONTROLLING TRANSIENT FIRE LOAD IN VERY LOW FIRE LOAD (TYPE 5A) SPACES ABOARD INSPECTED PASSENGER VESSELS

Ref: (a) Navigation and Vessel Inspection Circular (NVIC) 9-97 CH-1
(b) Marine Safety Center Technical Note (MTN) No. 01-13

1. PURPOSE. This policy letter promulgates recommended practices for controlling the transient fire load created by passenger baggage in very low fire load (Type 5A) spaces.

2. ACTION. Districts Commanders, Officers in Charge, Marine Inspection (OCMIs), and vessel owners and operators should use this policy letter to clarify the guidance in references (a) and (b).

3. DIRECTIVES AFFECTED. None.

4. BACKGROUND.

   a. Reference (a) allows Type 5A spaces to be exempted from certain structural fire protective insulation requirements where the fixed fire load is shown to be below 1.0 lb/ft^2. Use of this exemption is dependent on either a full engineering analysis of the Type 5A space, or strict adherence to the stipulations laid out in reference (b).

   b. Reference (b) sets a limit on transient fire load (passenger baggage) of 0.5 lb/ft^2. This metric creates a safe limitation on baggage brought aboard a vessel; however, it does not provide a useable mechanism for measuring the fire load during passenger loading.

5. DISCUSSION.

   a. Controlling the transient fire load is critical to ensuring the safety of a vessel utilizing a Type 5A space exemption, in accordance with references (a) and (b), given the inherent assumption of the 5A space policy that the fire load will remain sufficiently low to prevent a critical weakening of the structure surrounding the space in the unlikely event of a fire.

b. The enclosed "Recommended Practices for Controlling Transient Fire Load," outlines practices that will allow operators to meet the stipulation on transient fire load set out in reference (b). Specifically, the document provides guidance on loading, storage, and limitations of baggage and strollers, as well as related signage. However, nothing in the enclosure prevents the operator from proposing or the OCMIs from accepting alternatives to these practices.

c. The luggage handling system or luggage area referenced in the enclosure should not create a need to alter an existing vessel. This policy is intended to control the transient fire load operationally without the need for constructive changes.

d. Special attention must be given to eliminating the stowage of baggage and strollers in certain locations. In order to maintain the required row/aisle spacing by regulations, baggage must not be stored in aisles. Storage along bulkheads or in corners is prohibited because these locations present elevated danger in the event of a fire as their proximity to bulkheads and corners multiplies the flame height during a fire, potentially causing direct impingement of flame on aluminum overheads and accelerating the time to structural failure.

6. DISCLAIMER. While the guidance contained in this document may assist the industry, public, Coast Guard, and other Federal and State regulators in applying statutory regulatory requirements, the guidance is not a substitute for applicable legal requirements nor is it a regulation itself. Thus, it is not intended to, nor does it, impose legally binding requirements on any party outside the U.S. Coast Guard.

7. QUESTIONS. Questions or concerns regarding this policy may be directed to Commandant (CG-CVC), Commercial Vessel Compliance at CG-CVC-1@uscg.mil.

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Enclosure: Recommended Practices for Controlling Transient Fire Load

Distribution: All Sector(sp)/MSU/MSD

Copy: COMDT (CG-ENG), (CG-INV), (CG-CVC) & (CG-TI)
CG Marine Safety Center
All Area(ap)/District (dp) offices

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1. **Overview**. The purpose of this document is to control the amount of baggage, or transient fire load (TFL), within type 5A spaces. Maintaining a very low fire load reduces the growth potential of fire in a space and protects passenger's ability to use adjacent spaces for egress and embarkation of survival craft in the event of an emergency. Controlling baggage in 5A spaces ensures that corners and bulkheads remain clear of fire load buildup, prevents the amassing of many bags in one location, and maintains clear escape aisles for emergency egress. Construction fire load is carefully controlled using calculations, fire resistant furnishings, and low flame spread materials. However, transient fire load attributed to passenger baggage is not fixed and must be carefully managed through rigorous operational controls.

2. **History**. The Coast Guard began allowing the use of type 5A spaces in 1994 through Policy Fire Memorandum (PFM) 1-94; which was later incorporated into Navigation and Vessel Inspection Circular (NVIC) 9-97. The guidance was altered in 2010, NVIC 9-97 Change 1, to require a full engineering analysis, creating a significant burden on ship builders and operators. Following further research, the guidance was modified by Marine Safety Center Technical Note (MTN) 01-13, to allow certain configurations without a full engineering analysis, and to include limits on transient fire load (baggage) carried within type 5A spaces. This TFL limit was originally set at 0.15 lb/ft^2, but was updated in 2012 to 0.5 lb/ft^2. The TFL within a space is described by the weight of baggage brought aboard; however, the limit of 0.5 lb/ft^2 is neither intuitive, nor easily measurable. In order to maintain the safety margins inherent in the current 5A guidance, described by the above documents, control procedures must be in place to ensure safe levels of TFL.

3. **Regulatory Compliance**. Coast Guard regulations require that egress routes be kept clear of baggage and personal items, thereby requiring that escape aisles, pathways, and doors be kept clear (46 CFR § 116.800 and § 116.820). Coast Guard policy requires that fixed fire load within type 5A space be limited to 1.0 lb/ft^2 and transient fire load created by baggage be limited to 0.5 lb/ft^2 (NVIC 9-97 CH-1 and MTN 01-13).

   The following recommended practices will provide guidelines that both limit TFL and protect egress routes:

   a. **Baggage Limitations**. Baggage within type 5A spaces should be limited to one carry-on size bag and one small personal item per ticketed seat. Small personal items include purses, computer bags, small backpacks, or other similar items. Carry-on size items have a maximum size of 9in x 14in x 22in, and personal items have a maximum size of 9in x 10in x 17in. Bags that do

not meet these size limitations, as well as any additional bags beyond those allowed, should be checked with the crew for proper storage.

In any case, where the baggage items seem excessively heavy or there is any dispute as to their allowance within the space the item(s) should be weighed. The total weight allowable (carry-on plus personal item) should not exceed 25 lbs per ticketed seat.

Storage of the carry-on and personal items brought aboard type 5A spaces is limited to the immediate vicinity of the person bringing the bag(s) on board. Baggage must not be stored in escape aisles, corners, along bulkheads, or otherwise amassed to create a locally high fire load area. Wherever possible, the crew should ensure passengers store baggage beneath seats, behind/under seat backs, beneath tables, at passenger's feet or otherwise as low as possible.

b. **Strollers**. Due to their varying sizes, combustible construction, and widespread use, strollers present a unique challenge in terms of controlling TFL. All unoccupied strollers should be folded flat and either stored beneath/behind seats (if practicable) or turned over to the crew to be checked into the baggage handling system. Occupied strollers are permissible within type 5A spaces, but should not be parked in corners, or in any area which obstructs the required minimum width for escape aisles between rows of seats.

   Children who are in a stroller, and do not occupy a seat, are not permitted a baggage allowance, as the control of TFL is based on the number of seats within the space. Children in a stroller are permitted a blanket, doll, stuffed animal, or other similar item, which does not count towards the allowance. Baggage stowed aboard the stroller ***will*** count toward the limit of one carry-on bag and one personal item for the accompanying parent/guardian and will be considered as part of the total weight of baggage allowed per ticketed seat in situations of dispute. The stroller itself, and items affixed to the stroller (such as food trays, cup holders, canopies, etc.) will not count toward the baggage weight limit of 25 lbs.

c. **Large Bag Storage**. Items of baggage that do not fit within the prescribed limits, or are determined by the crew to be too large, should be checked and stowed in a weatherproof dedicated baggage area. This area should be a space separated from the type 5A space, or a covered baggage storage rack or container on an open deck. Large bag storage should be controlled and monitored by the crew of the vessel, inaccessible to the passengers during the voyage, and should be secured so as to prevent excessive movement during the voyage.

In instances where, due to the construction and layout of the vessel, it is not possible to store larger baggage items outside the type 5A space, limited storage may be permitted within type 5A spaces for existing vessels at the discretion of the cognizant Officer in Charge, Marine Inspection (OCMI) and subject to the following considerations. These considerations are not all inclusive and shall not be construed as limiting the authority of the OCMI:

1. Limited availability of space.
2. Reduced construction fire load (below the type 5A limitation of 1.0 lb/ft^2).
3. Ability to easily and quickly jettison baggage.
4. Storage containers with wheels.
5. Additional crew training.
6. Additional equipment such as fire blankets.
7. Physical separation from passengers.
8. Proximity to doors, escape routes, and embarkation/assembly areas.

d. Signage. In order to facilitate passenger education and ensure clear expectations, signs should be placed at the boarding point of the vessel, and other locations as determined by the operator, to inform passengers of baggage restrictions. This signage should include wording on the limitations of baggage as well as other wording specific to the particular operation to describe baggage-handling procedures.

The suggested minimum wording for the sign is included below:

> "Stowage of baggage on this vessel must comply with 46 CFR § 116.820. Baggage is limited to one carry-on size item and one small personal item. Larger baggage should be checked with the crew and stowed in a dedicated storage area."

4. <u>Special Consideration</u>. Vessels that require special consideration should be evaluated considering the factors discussed within this document. Decisions made with regard to equivalent levels of safety should consider the overarching concerns of limiting fire load, preventing storage in corners and escape aisles, and eliminating amassed baggage to ensure the safety of egress and embarkation.

5. <u>Master's Authority</u>. Storage of baggage, as well as baggage amounts, sizes and types, is permitted in accordance with these practices at the discretion of the master of the vessel. Nothing within this document should prevent the master from imposing further requirements or more strictly limiting carriage or placement of baggage in the interest of the safety of the passengers, crew, and vessel.