

MSC Guidelines for Review of Means of Escape (H)

Procedure Number: H2-17

Revision Date: 12/17/99

References

- a. Title 46 CFR Part 72 – Construction and Arrangement
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Disclaimer

These guidelines were developed by the Marine Safety Center staff as an aid in the preparation and review of vessel plans and submissions. They were developed to supplement existing guidance. They are not intended to substitute or replace laws, regulations, or other official Coast Guard policy documents. The responsibility to demonstrate compliance with all applicable laws and regulations still rests with the plan submitter. The Coast Guard and the U. S. Department of Transportation expressly disclaim liability resulting from the use of this document.

Contact Information

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Note

In lieu of full compliance with certain Subchapter H requirements, certain vessels may be designed to Subchapter H as modified by Navigation and Vessel Inspection Circular (NVIC) No. 8-93, "Equivalent Alternatives to 46 CFR Subchapter H Requirements Related To Means of Escape, Safe Refuge Areas, Main Vertical Zone Length" (<http://www.uscg.mil/hq/g-m/nvic/index90.htm#1993>). If done so, then refer to Procedure Number H2-16, MSC Guidelines for Review of Emergency Evacuation Plans (NVIC 8-93).

General Review Guidance

Arrangement

Ensure each MVZ is served by at least one Type 1 stairway, so that independent of entering adjoining MVZ's, escape may be effected from any accommodation space or any other space where persons may be normally quartered or employed, to all other decks having any such spaces within the same MVZ without coming out of the stair tower enclosure. [46 CFR 72.05-20(e)]

- In cases where a Type 1 stairway is accessible from two MVZ's, it may be considered as the required Type 1 stairway for both zones provided all boundaries of the stairway meet MVZ requirements.
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- Ensure each Type 1 stairway gives access to the Embarkation Deck or, if the Embarkation Deck does not extend to the portion of the vessel in question, gives access to at least one weather deck from which convenient communication to the Embarkation Deck is provided by means of Type 4 stairways. [46 CFR 72.05-20(e)]
- On the Embarkation Deck, each Type 1 stairway shall provide at least 44 in. of exit door width to each side of the vessel. Exit may be provided directly to weather or indirectly by passageways and/or corridors which lead to weather.

Stairways

Ensure all stairways are sized iaw 46 CFR 72.05-20(p).

- For all types of stairs the minimum width is determined on a deck-by-deck basis. However, once a minimum required width has been established at any one level, that width may not be reduced at any subsequent deck level in the direction of normal escape. [46 CFR 72.05-20(p)(2)]
- Determine passenger capacity of the various spaces iaw 46 CFR 72.05-20(p)(3):
 - Passenger staterooms – designed capacity.
 - Crew staterooms – 2/3 capacity.
 - Theaters, dining halls and similar spaces having fixed seating – maximum seating capacity.
 - Working spaces – normal capacity.
- Type 1 stairways:
 - In determining the number of persons using the stairways, all persons within the MVZ's in question are assumed to be using Type 1 stairways. If more than one Type 1 stairway serves a particular zone, the persons shall be distributed between the stairways.
 - No consideration is given to any Type 2 or 3 stairways.
- Types 2, 3 and 4 stairways:
 - In determining the number of persons using the stairways, the normal operation of the vessel shall be the determining factor.
 - If any stairway forms part of the normal debarkation route, the number of persons using the stairway for that purpose shall be considered.

In general, curved, spiral or winding stairways are not permitted. [46 CFR 72.05-20(h)]

Stairway landings shall be sized as follows: [46 CFR 72.05-20(r)]

- For all types of stairways, at the top and bottom of each flight of stairs, there shall be a clear landing having an area at least equal to the square of the actual stair tread width.
- For Type 1 stairways, there shall be provided within the enclosure at each deck level a landing having a minimum clear area in square feet, exclusive

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of the stairs, equal to 1.2 times the number of persons from that deck using the stairway.

- Where an aisle around a stairway is required due to the relationship of the flights, such aisle shall have a clear width at all points at least equal to the actual stair tread width.

Insofar as is reasonable and practicable, Types 1 and 2 stairways, and all elevator enclosures, should not give direct access to accommodations or other enclosed spaces in which a fire may originate. [46 CFR 72.05-20(f)]

Ensure the doors leading to stairways have been properly sized: [46 CFR 72.05-20(s)]

- The dimensioning of doors shall be based on the same fundamentals used for stairway tread widths. However, the number of people involved for a particular door shall be determined from the arrangements, each door being calculated independent of any other doors to the stairway at the same level.
- In no case shall a clear door width be less than 28 in.
- The total clear width of doors to stairways shall be in accordance with table 46 CFR 72.05-2(s).

Means of Escape

Ensure there are at least two means of escape from all general areas accessible to the passengers or where the crew may be quartered or normally employed.

[46 CFR 72.10-5]

- At least one of these means of escape shall be independent of watertight doors.
- Elevators shall not be considered as one of the required means of escape.
- Stairways serving only a space and a balcony to a space shall not be considered as one of the required means of escape.
- The two means of escape shall be as remote as practicable.
- Ladders leading to deck scuttles may not be included as a means of escape except as permitted by 46 CFR 72.10-15
- No means shall be provided for locking doors giving access to either of the two required means of escape.
- In all cases, public spaces having a deck area of over 300 sq. ft. shall have at least two exits. Where practicable, these exits shall give egress to different corridors, rooms or spaces.
- The stairways, corridors and doors shall be so arranged as to permit a ready and direct access to the various lifeboat embarkation areas.

[46 CFR 72.10-40]

Dead end corridors, or the equivalent, more than 40 feet in length shall not be permitted.