

## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

46 CFR Parts 71, 114, 115, 122, 170, 171, 172, 174, 175, 176, 178, 179, and 185

[Docket No. USCG-2007-0030]

RIN 1625-AB20

### Passenger Weight and Inspected Vessel Stability Requirements

**AGENCY:** Coast Guard, DHS.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Coast Guard proposes to amend its regulations governing the stability of passenger vessels and the maximum number of passengers that may safely be permitted on board a vessel. The average American weighs significantly more than the assumed average weight per person utilized in current regulations, and the maximum number of persons permitted on a vessel is determined by several factors, including an assumed average weight for each passenger. Updating regulations to more accurately reflect today's average weight per person will maintain intended safety levels by taking this weight increase into account. The Coast Guard is also taking this opportunity to clarify and update intact stability and subdivision and damage stability regulations.

**DATES:** Comments and related material must reach the Docket Management Facility on or before November 18, 2008. Comments sent to the Office of Management and Budget (OMB) on collection of information must reach OMB before November 18, 2008.

**ADDRESSES:** You may submit comments identified by Coast Guard docket number USCG-2007-0030 to the Docket Management Facility at the U.S. Department of Transportation. To avoid duplication, please use only one of the following methods:

(1) *Online:* <http://www.regulations.gov>.

(2) *Mail:* Docket Management Facility (M-30), U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

(3) *Hand delivery:* Room W12-140 on the Ground Floor of the West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-366-9329.

(4) *Fax:* 202-493-2251.

You must also send comments on collection of information to the Office of Information and Regulatory Affairs, Office of Management and Budget. To ensure that the comments are received on time, the preferred method is by e-mail at [oir\\_submission@omb.eop.gov](mailto:oir_submission@omb.eop.gov) or fax at 202-395-6566. The subject line should include the docket number (USCG-2007-0030) and say ATTN: Desk Officer, U.S. Coast Guard, DHS. An alternate, though slower, method is by U.S. mail to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attn: Desk Officer, U.S. Coast Guard.

You may inspect the material proposed for incorporation by reference at room 1308, U.S. Coast Guard Headquarters, 2100 Second Street, SW., Washington, DC 20593-0001 between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-372-1372. Copies of the material are available as indicated in the "Incorporation by Reference" section of this preamble.

**FOR FURTHER INFORMATION CONTACT:** If you have questions on this proposed rule, call Mr. William Peters, U.S. Coast Guard, Office of Design Engineering Standards, Naval Architecture Division (CG-5212), telephone 202-372-1371. If you have questions on viewing or submitting material to the docket, call Ms. Renee V. Wright, Program Manager, Docket Operations, telephone 202-366-9826.

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#### I. Public Participation and Request for Comments

We encourage you to participate in this rulemaking by submitting comments and related materials. All comments received will be posted, without change, to <http://www.regulations.gov> and will include any personal information you have provided. We have an agreement with the Department of Transportation (DOT) to use the Docket Management Facility. Please see DOT's "Privacy Act" paragraph below.

##### A. Submitting Comments

If you submit a comment, please include the docket number for this rulemaking (USCG-2007-0030), indicate the specific section of this document to which each comment applies, and give the reason for each comment. We recommend that you include your name and a mailing address, an e-mail address, or a phone number in the body of your document so that we can contact you if we have questions regarding your submission. You may submit your comments and material by electronic means, mail, fax, or delivery to the Docket Management Facility at the address under **ADDRESSES**; but please submit your comments and material by only one means. If you submit them by mail or delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period. We may change this proposed rule in view of them.

##### B. Viewing Comments and Documents

To view comments, as well as documents mentioned in this preamble as being available in the docket, go to <http://www.regulations.gov> at any time. Enter the docket number for this rulemaking (USCG-2007-0030) in the Search box and click "Go >>." You may also visit the Docket Management

Facility in Room W12-140 on the ground floor of the DOT West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### C. Privacy Act

Anyone can search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review the Department of Transportation's Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477), or you may visit <http://DocketsInfo.dot.gov>.

### D. Public Meeting

We do not now plan to hold a public meeting. But you may submit a request for one to the Docket Management Facility at the address under **ADDRESSES** explaining why one would be beneficial. If we determine that one would aid this rulemaking, we will hold one at a time and place announced by a later notice in the **Federal Register**.

### E. Technical Review by Society of Naval Architects and Marine Engineers

An *ad hoc* panel of the Society of Naval Architects and Marine Engineers (SNAME) has reviewed reports delivered to the Coast Guard by BMT Designers and Planners and CSC Advanced Marine Center and provided technical advice concerning vessel stability and increased passenger weight. SNAME is a nonprofit, professional society, and the panel's 28 experienced naval architects are able to provide technical peer review from a broad cross-section of the designers, builders and operators of passenger vessels. The Charter for *Ad Hoc* Panel 15 on Loading Criteria for People Aboard Passenger Vessels and a memorandum from the panel's chairman to the Coast Guard concerning the Phase 1 Impact Analysis Report from BMT Designers and Planners are available in the docket at <http://www.regulations.gov>. A list of the panel's members and information about their meetings is available at [http://www.sname.org/committees/tech\\_ops/O44/passenger/activity-15.html](http://www.sname.org/committees/tech_ops/O44/passenger/activity-15.html). The Coast Guard will make any additional reports from the *ad hoc* panel available to the public by posting them to the docket.

## II. List of Acronyms

2008 IS Code International Code on Intact Stability, 2008

ABS American Bureau of Shipping  
 CDC Centers for Disease Control and Prevention  
 CFR Code of Federal Regulations  
 COI Certificate of Inspection  
 DHS Department of Homeland Security  
 DOT Department of Transportation  
 FAA Federal Aviation Administration  
 EO Executive Order  
 FR Federal Register  
 GM Metacentric height  
 LBP Length Between Perpendiculars  
 LCG Longitudinal Center of Gravity  
 MARPOL International Convention for the Prevention of Pollution from Ships  
 MSC Marine Safety Center  
 NHANES National Health and Nutrition Examination Survey  
 MISLE Marine Information for Safety and Law Enforcement  
 NAICS North American Industry Classification System  
 NEPA National Environmental Policy Act of 1969  
 NPRM Notice of Proposed Rulemaking  
 NTSB National Transportation Safety Board  
 OCMi Officer in Charge, Marine Inspection  
 OMB Office of Management and Budget  
 PSSC Passenger Ship Safety Certificate  
 PSST Pontoon Simplified Stability Proof Test  
 SBA United States Small Business Administration  
 SNAME Society of Naval Architects and Marine Engineers  
 SOLAS International Convention for the Safety of Life at Sea  
 SST Simplified Stability Proof Test  
 U.S.C. United States Code  
 VCG Vertical Center of Gravity

## III. List of Terms

*Angle of heel* means the angle of the vessel's centerline to the upright when the vessel is inclined.

*Deadweight survey*: See *lightweight survey*.

*Draft* means the vertical distance from the bottom of the hull (*i.e.*, the keel) or another point that protrudes below the hull to the waterline.

*Exposed waters* generally means more than 20 nautical miles from a harbor of safe refuge.

*Flush deck* means any continuous, unbroken deck from stem to stern.

*Freeboard* means the vertical distance from the deck edge to the waterline. A decrease in freeboard (*i.e.* reduced freeboard) corresponds to an increase in draft.

*Heel* is the degree to which a ship leans transversely as a result of variable and dynamic external forces.

*Heeling moment* is generally a force acting through a distance that causes a vessel to roll or heel to one side. A heeling moment that is larger than the vessel's righting ability can cause the vessel to overturn or capsize. Coast Guard requirements limit the amount of heel a vessel can have when wind or

passenger movement causes the heeling moment.

*Inclining or stability test* is a methodical process that involves moving a series of known weights on a vessel and measuring the resulting change in the equilibrium heel angle to determine the vessel's stability characteristics.

*Intact stability* generally means the stability properties of a vessel without any damage to its watertight buoyancy volume.

*Length between perpendiculars (LBP)* means the length of the summer load waterline from the vessel's stern post to the point where it crosses the vessel's stem.

*Lightship displacement or lightweight* means the weight of a vessel that is complete in all respects, but without consumables, stores, cargo, passengers, crew, and their effects, and without any liquids on board except fixed ballast and machinery and piping fluids, such as lubricants and hydraulics, which are at operating levels.

*Lightweight survey* is a part of the stability test that determines any changes in lightship displacement and longitudinal center of gravity (LCG). It involves taking an audit of all items that should be added, deducted, or relocated on a vessel so that the observed condition of the vessel can be adjusted to the lightship condition. Often referred to as a *deadweight survey*.

*Longitudinal center of gravity (LCG)* means the location along the vessel's length at which the total weight of the vessel may be assumed to act.

*Master* means a person holding a valid license that authorizes that person to serve as a master of a passenger vessel.

*Open boat* means a vessel not protected from entry of water by means of a complete weathertight deck.

*Operator* means the person or entity who provides operational instructions to and receives reports from the master of the vessel and is responsible for the vessel's maintenance and repair, schedule of operations, crewing, etc.

*Owner* means the person or entity holding title to the vessel.

*Partially protected waters* generally means not more than 20 nautical miles from a harbor of safe refuge.

*Passenger heel* refers to the heeling moment that occurs when passengers move to one side of the vessel's centerline, causing the vessel to roll, or heel.

*Pontoon vessel* generally means any vessel having two or more sealed hulls, which are structurally independent and detachable from the vessel's deck or cross structure.

*Protected waters* generally means sheltered waters that present no special hazards.

*Sailing vessel* means a vessel that is propelled by wind, using sails.

*Subdivision and damage stability* refers to the stability characteristics of a vessel when damaged, generally focusing on flooding of watertight compartments.

*Vertical center of gravity (VCG)* means the height above the keel at which the total weight of the vessel may be assumed to act.

*Vessel stability* refers to the tendency of a ship to remain upright or return to upright when inclined by forces that are caused by the action of waves, wind, passenger movement, etc.

*Waterplane* means the horizontal area obtained from the intersection of the ship's hull with the water's surface at a particular draft. The waterplane area is used to calculate how much immersion will be caused by additional weight.

*Wind heel* refers to the heeling moment caused when the wind acts on the lateral area of the vessel above the waterline and causes the vessel to roll, or heel.

#### IV. Background and Purpose

The total number of persons permitted on a passenger vessel, inspected and certificated under 46 CFR Subchapters H, K or T, is limited by a number of different design factors, one of which is stability. Stability requirements include intact stability for almost all vessels, as well as subdivision and damage stability generally for any vessel carrying more than 49 passengers and all vessels over 65 feet in length. This NPRM is intended to clarify and update both intact stability and subdivision and damage stability regulations, primarily related to the carriage of passengers for hire, and to update the weight per person used for all vessels. The intent of this rulemaking is to ensure that each vessel operates without being overloaded.

The overall good safety record of the passenger vessel industry reflects safety factors inherent in the stability requirements applied to passenger vessels. Increasing the passenger weight to reflect current data will help ensure that the safety margins included in our regulations remain valid.

These safety margins operate in two ways. The first is through intact stability, which generally relates to the stability of a vessel in normal operation. The second is through subdivision and damage stability, which generally relates to the stability of a vessel in an emergency involving a flooded condition.

A vessel's stability information, including any restrictions on route and the number of passengers permitted, is provided to the vessel operator most often in the form of a stability letter issued by the Coast Guard's Marine Safety Center (MSC), and/or a Coast Guard Certificate of Inspection (COI) issued by the Officer in Charge, Marine Inspection (OCMI). When both are provided, restrictions on the COI govern. The COI is issued after the vessel's stability has been evaluated in one of two ways:

For vessels greater than 65 feet in length, stability is evaluated through detailed design calculations—submitted to the MSC—that produce the vessel's stability requirements. This process, which takes into account the assumed total weight of persons on board, is described in 46 CFR, subchapter S, parts 170 and 171.

Vessels not greater than 65 feet in length normally undergo a performance test conducted in the presence of the OCMI, instead of submitting design stability calculations to the MSC (46 CFR part 178). This performance test, which also takes into account the assumed total weight of persons on board, is either a simplified stability proof test (SST) or, if the vessel is a pontoon vessel, a pontoon simplified stability proof test (PSST). The SST is intended to evaluate monohull vessels, and the PSST is intended to evaluate pontoon vessels operating on protected waters. For ease of discussion, we will use the term SST in this preamble to describe any simplified stability proof test.

Vessels to which these tests do not apply may need to be evaluated through design calculations to show that they meet intact stability requirements. Alternately, a vessel might satisfy stability requirements by complying with a standard acceptable to the Commanding Officer, Marine Safety Center. Finally, simplified subdivision calculations may be necessary for some vessels not greater than 65 feet in length.

To arrive at a total assumed weight of persons on board for calculating stability, an assumed average weight per person is used. Section 178.330 of Title 46 of the CFR specifies that the assumed average weight per person is 160 pounds, except that vessels operating exclusively on protected waters and carrying a mix of men, women, and children may use an average weight of 140 pounds per person. These weights were established in the 1960s.

In a report issued in October 2004, the Centers for Disease Control and Prevention (CDC) concluded that the

average weight of an individual in the United States has increased dramatically in the last 40 years, with the greatest increase seen in adults. (The report, *Advance Data From Vital Health Statistics Mean Body Weight, Height, and Body Mass Index, United States 1960–2002*, No. 347, October 27, 2004, is available in the docket.) This increase in passenger and crew weight can have an adverse effect on the stability of passenger vessels due to several factors, including increased vertical center of gravity, reduced freeboard, and increased passenger heeling moment.

On December 20, 2004, the National Transportation Safety Board (NTSB) issued Safety Recommendation M-04-04 (available in the docket), which included findings that the current 140 pound per person weight allowance for operations on protected waters does not reflect actual loading conditions. The NTSB recommended that the Coast Guard revise its guidance to OCMI's for determining the maximum passenger capacity of small passenger pontoon vessels either by: (1) Dividing the vessel's SST weight by 174 pounds per person; or (2) restricting the actual cumulative weight of passengers and crew to the vessel's SST weight. In correspondence to the NTSB dated April 7, 2005 (available in the docket), the Coast Guard concurred that the average weight per person used in SSTs needed to be updated, and noted that an internal Coast Guard study identified the same issue. That study, which is entitled *Study of Effects on Commercial Passenger Vessels Due to Weight Standards*, is available in the docket.

This notice of proposed rulemaking (NPRM) follows notices to the public, published in the **Federal Register** on April 26, 2006 (71 FR 24732) and November 2, 2006 (71 FR 64546), recommending voluntary interim measures for passenger vessels to follow while the Coast Guard studied the issue of increased passenger weight. In summary, those voluntary measures advised pontoon vessels and other small passenger vessels to (1) more stringently monitor wind and wave conditions prior to departure and (2) begin using 185 pounds as the new assumed average weight per person when calculating passenger capacity. A discussion of how 185 pounds was chosen is contained in the April 26, 2006 notice and in the discussion of § 170.090 in this preamble.

At last count, the Docket Management Facility received 108 comments from the public in response to those notices. They are posted for public view at <http://www.regulations.gov> under docket number USCG-2007-0030, and

can be viewed by following the directions in the "Viewing comments and documents" section of this preamble. We will respond to those comments, together with comments received in response to this NPRM, when we publish an effective rule.

Finally, this proposed rule is an opportunity to identify where corrections, clarifications, and updates need to be made to existing regulations. These proposed changes, which would include changes in international requirements, will be discussed in greater detail later in this preamble, under "Corrections, Clarifications, and Updates."

## V. Discussion of Proposed Rule

For easier reference, we have divided this discussion into the following topics: A. Vessel Stability; B. Weight of Passengers and Crew; C. Notes on Pontoon Vessels; D. SOLAS and Resolution A.265; E. Corrections, Clarifications, and Updates; F. American Bureau of Shipping; and G. Discussion of Proposed Amendments by Section.

### A. Vessel Stability

An increase in passenger and crew weight will typically have an adverse effect on vessel stability. Whether or not such additional weight would result in non-compliance of a vessel with applicable stability criteria depends upon the amount and location of the additional weight, the degree by which the vessel demonstrated compliance with the stability criteria previously, and which of the criteria was limiting, if any.

Historically, a margin of safety has been built into the requirements for both intact stability and subdivision and damage stability. The standards for intact stability criteria are generally designed to provide vessels with adequate ability to resist overturning heeling moments, such as those caused by wind or passenger weight shifting to one side. Standards for subdivision and damage stability are designed to address the worst case loading conditions and certain flooding scenarios that could occur as a result of accidental damage. Although intact stability and subdivision and damage stability standards address different stability risks, we believe that these two stability standards together are responsible in part for the good safety record of the passenger vessel industry. Therefore, we

are proposing that intact stability and subdivision and damage stability requirements utilize an updated assumed average weight per person.

We also propose adding more specific requirements for a vessel owner or operator to show that the vessel meets intact stability and subdivision and damage stability standards, including provisions accounting for possible changes in vessel and weight per person. These requirements will improve a master's ability to meet stability criteria for the intended service and also avoid overloading the vessel.

Additionally, to help ensure that vessels maintain the intended safety levels after initial certification, we would clarify the requirement that stability information be checked at each annual inspection or COI renewal to confirm that it is still valid for the loading and service intended.

Finally, we propose requiring stability verification—including calculations—at least every ten years.

We propose detailing these requirements in new sections that would be added to each of the three subchapters that address the inspection of passenger vessels. The new sections, entitled "Stability Verification," would be added at § 71.25–50 in subchapter H, § 115.505 in subchapter K, and § 176.505 in subchapter T (all of which are contained in chapter I, Title 46 of the CFR). Each new section would be comprised of paragraphs (a), (b), (c) and (d).

So that owners, operators, and OCMIs may clearly understand these requirements, how we intend to implement them, and the analyses upon which they are based, a discussion in three parts is given below:

"Part One—Explanation" describes the purpose and intent behind each of the paragraphs—(a), (b), (c), and (d)—in the proposed new "Stability Verification" sections.

"Part Two—Analysis" describes the process whereby the Coast Guard developed an assessment methodology for prioritizing the vessels that would require stability verification.

"Part Three—Assessment Methodology" describes the methodology to be used by owners, operators, and OCMIs to, first, determine whether a change in the permitted number or distribution of passengers might be necessary and, second, to assess whether a vessel would be likely to require new stability testing or evaluation.

## Part One—Explanation

Paragraph (a) of §§ 71.25–50, 115.505, and 176.505

Paragraph (a) would add, as the owner or operator's responsibility, two checks regarding the vessel's stability information. First, at each annual inspection and Certificate of Inspection (COI) renewal, the owner or operator would demonstrate that the stability information is still appropriate for the vessel's intended loading and service. This requirement would augment the confirmation by a Coast Guard marine inspector that a valid stability letter is properly posted aboard a vessel.

Second, the owner or operator would need to confirm that the total weight of gear and variable loads is still valid for the intended service. (The total weight of gear and variable loads, including the total weight of persons carried, is the basis for the stability letter and/or the COI.) The owner or operator would need to ensure that the master knows both the maximum total weight of persons and the average weight per person on which the total weight is based.

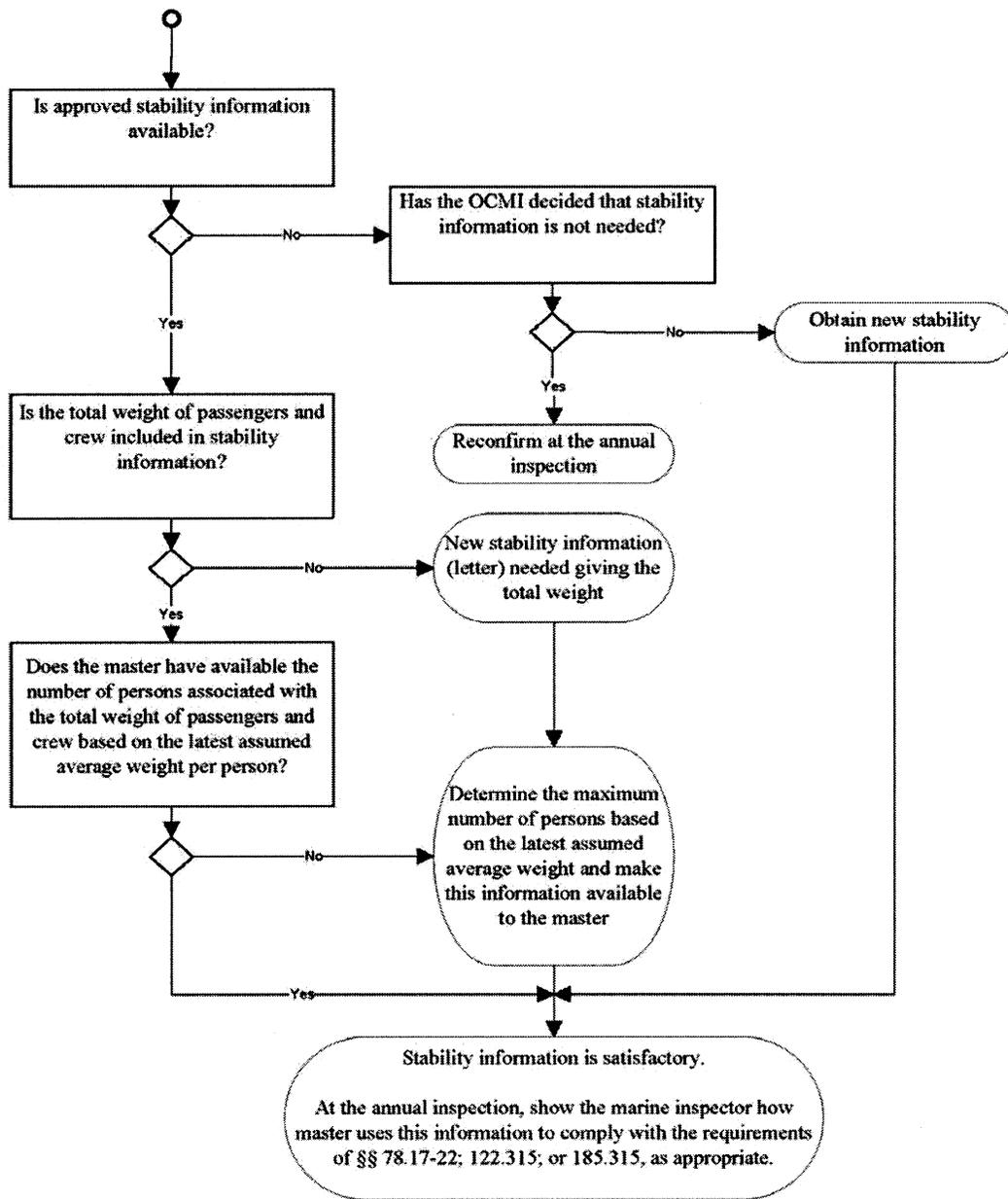
Currently, all passenger vessels are required to comply with a section in the "Operations" part of each inspection subchapter (§§ 78.17–22, 122.315, and 185.315 of this title) that requires a master to verify, prior to departure on every voyage, that the loaded vessel complies with all stability information, and that the stability information is being used properly to ensure that the vessel is not overloaded. Paragraph (a) would add a requirement that the owner or operator demonstrate the methods the master uses to do this. Such methods could include the competent reading of loading or draft marks, and must include the proper use of that information for complying with the draft and/or freeboard restrictions normally contained in the stability letters for these types of vessels.

If the stability information is no longer valid, a new stability letter would be needed. The new stability letter would contain revised operating restrictions that the master should follow to avoid overloading the vessel and to maintain compliance with stability requirements.

The following flowchart illustrates the stability confirmation process discussed above:

BILLING CODE 4910–15–P

### Stability Confirmation (at each annual inspection)



Paragraph (b) of §§ 71.25–50, 115.505, and 176.505.

This paragraph would require a vessel's stability to be verified at 10 year intervals or when modifications are made to the vessel that could affect the vessel's ability to meet stability requirements. The 10 year "clock" would start whenever the last stability verification was conducted or stability letter was issued, or when a determination of sister vessel status was made (as permitted in part 170 of Subchapter S). The "clock" would be reset after each stability verification. For a vessel that would be issued a SOLAS Passenger Ship Safety Certificate (PSSC), the SOLAS requirement for a lightweight survey to be conducted at least once every 5 years would constitute a verification of the vessel's stability for the purposes of this paragraph.

In other words, paragraph (a) requires the owner or operator to make sure that the vessel master knows what the vessels' stability limits are, based on the most recent stability calculations. Paragraph (b) requires new calculations of the per-person weight, and then requires the use of that weight to verify—usually with calculations—that the vessel still meets applicable stability requirements.

Paragraph (c) of §§ 71.25–50, 115.505, and 176.505.

This paragraph would provide the minimum requirements for what the stability verification required by paragraph (b) would include. The requirements would vary depending on whether the vessel's stability compliance was governed by subchapter S or subchapter T of title 46 CFR. Subchapter S requires that detailed design calculations be submitted to the Marine Safety Center (MSC), as described in parts 170 and 171. This requirement also applies to all subchapter H and K vessels and some subchapter T vessels. However, a simplified test, either an SST or PSST, is performed for most subchapter T vessels, as described in part 178. In cases where a simplified test is neither feasible nor appropriate, a stability standard would be determined by the MSC.

Unless the OCMi permits the use of another value, the assumed average weight per person would be determined according to proposed paragraph 170.090(d) or 178.330(a)(4)(ii), whichever is applicable. The OCMi may permit another value when the owner or operator can show that another value more accurately represents the average

weight of persons carried in service; for example when the vessel carries primarily children.

Using a total weight of persons based on this latest average weight per person (i.e., the new total test weight), the owner or operator would need to verify that the vessel meets applicable stability criteria. For subchapter S compliance, this would mean that calculations would need to be performed if the total weight of persons carried is greater than the total weight used in the previous stability verification. For vessels undergoing a simplified proof test, the owner or operator would need to either perform a new test using the new total test weight, or prove that the vessel could meet current applicable requirements using data from the most recently performed simplified test, if those data are valid.

For vessels meeting subchapter S requirements, the verification would also include conducting a deadweight survey to verify that the vessel's stability characteristics have not changed significantly, and that it remains in compliance with applicable stability criteria. (Coast Guard policy for what constitutes a significant change is contained in Marine Safety Center Technical Note (MTN) 04–95, *Lightship Change Determination; Weight-Moment Calculation vs. Deadweight Survey vs. Full Stability Test*, available in the docket.) If sufficient accuracy can be obtained for the stability verification prior to the deadweight survey, some relaxation in the deadweight survey requirements could be accepted by the MSC. For example, a greater number of tanks containing operating liquids could be kept at normal levels.

If the lightship characteristics have changed so that stability compliance is not assured under the existing stability information, a new stability analysis—together with associated loading calculations—would be needed, and a new stability letter would be issued.

When the passenger capacity of a vessel is limited by subdivision and/or damage stability considerations, the proposed increase in assumed average passenger weight may require a corresponding reduction in passenger capacity. For example, in a passenger vessel to which 46 CFR 179.220 is applicable, an increase in the assumed average weight per person could cause either a change in freeboard, resulting in a reduction in the permissible distance between watertight bulkheads (see 46 CFR 179.220(a)(2)), or a reduction in the permitted number of passengers in order to remain in compliance with existing subdivision and damage stability requirements. In a vessel to which

subchapter S subdivision and damage stability requirements are applicable, increased passenger weight could cause the margin line to become submerged in the flooded condition, which regulations prohibit.

Owners of such vessels as those discussed above may seek to modify their vessels to maintain their current passenger count. When significant, such modifications may be determined by the Coast Guard to be "major conversions." When a modification constitutes a major conversion, it is appropriate to bring the vessel into compliance with the latest safety standards where it is both reasonable and practicable to do so. The cognizant OCMi makes a determination on which areas of a vessel undergoing major conversion must be brought into compliance.

In all cases, for a passenger vessel that undergoes a major conversion or incurs changes that affect its stability, the required verification of both intact stability and subdivision and damage stability compliance would use the latest assumed average weight per person.

Paragraph (d) of §§ 71.25–50, 115.505, and 176.505.

This paragraph would permit the Coast Guard authority responsible for issuing the stability information to defer or dispense with stability verification based on the vessel's characteristics or the degree to which the vessel could be affected by increased weight per person or vessel weight. For vessels that are subject to subchapter S requirements, this authority is normally the Commanding Officer, Marine Safety Center; for vessels whose stability is based on a simplified stability test, this authority is normally the OCMi.

Analyses described under the ensuing "Part Two—Verification Process" of this preamble showed that some vessel types experience a negligible effect from increased passenger weight. These vessel types include sailing vessels, vessels that carry substantial cargo amounts compared to the passenger weight, vessels that have an established process to avoid overloading, and/or vessels that follow the voluntary measures for prudent operation contained in the **Federal Register** notice published on April 26, 2006 (71 FR 24732). A more detailed description of those vessels relatively unaffected by an increase in weight per person can be found in "Part Three—Assessment Methodology."

#### Part Two—Analysis

The Coast Guard sponsored an analysis of the impact of increased

weight per person on the U.S. inspected passenger vessel fleet. From the Marine Information for Safety and Law Enforcement (MISLE) database, we found that nearly 75 percent of the inspected U.S. flag passenger vessels are 65 feet in length or less. The stability of most of these vessels was based on the performance of a simplified stability test (SST), either for a monohull or a pontoon passenger vessel.

The analysis showed that the effect of increased passenger weight on vessels depended on factors not included in the MISLE database, such as the amount of freeboard and draft and whether the vessel is a flush deck or open boat type.

To supplement that study, additional stability analyses were performed on a number of monohull vessels that had undergone SSTs. By analyzing the SST results, conservative estimates of key parameters—such as the moment to heel 1 degree—can be made, that, in turn, can be used in an assessment methodology for intact stability verification.

These analyses were peer-reviewed by the Society of Naval Architects and Marine Engineers (SNAME) *Ad Hoc* Panel No. 15, which provided both a technical appraisal of the analyses and

recommendations on how they could be used. Two of the panel's recommendations are associated with the proposed prioritizing process:

(1) The panel recommended the Coast Guard adopt a risk-based process that looks at relative changes to a vessel's stability characteristics and compares these relative changes to acceptable limits determined by the Coast Guard; and

(2) The panel recommended the Coast Guard adopt a technical process in reviewing stability. That process would use the stability requirements the vessel is designed to meet to determine if the vessel has been adversely affected by an increase in passenger weight such that a new stability evaluation should be performed.

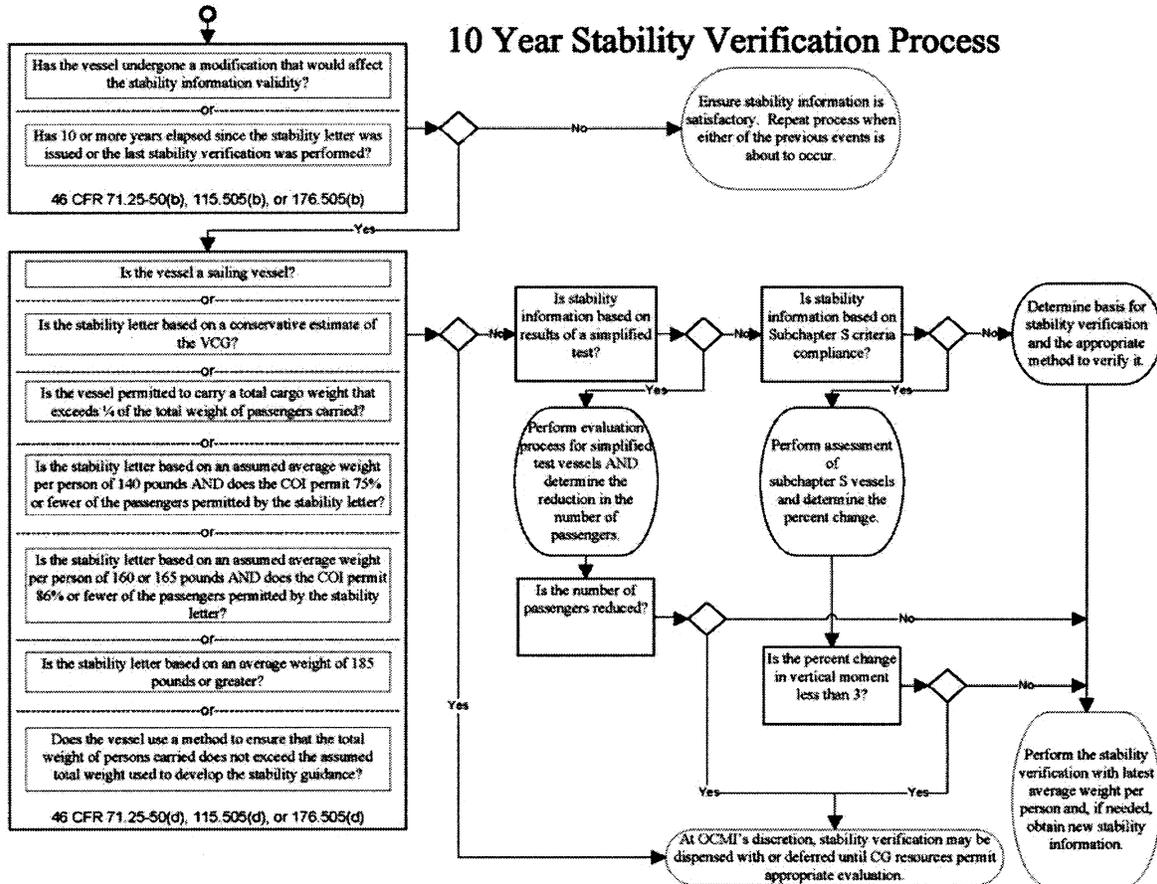
We agree with these recommendations. In addition, based on the analyses of the impact of increased passenger weight on the passenger vessel fleet, we developed an assessment methodology, detailed in "Part Three—Assessment Methodology" below, that reflects these recommendations.

As stated above, this proposed rule would require that a stability verification be performed within ten

years of the date the last stability letter was issued or a previous stability verification was performed. Regardless of when the stability information was issued, however, all vessels must meet stability requirements using the latest assumed average weight per person immediately upon the effective date of this rule. Additionally, in all cases, when a vessel or its loading is modified in any way that alters its stability, a stability verification is required as soon as is practicable, using the latest assumed average weight per person.

Since a very large portion of inspected passenger vessels currently have stability letters that are more than 10 years old, we developed a process that allows owners, operators, and OCMIs to determine whether the stability verification should be conducted as soon as is practicable, deferred to a later date—most likely the next regular inspection—or perhaps dispensed with. This process would more evenly distribute demand for the Coast Guard resources that will be necessary to guide implementation of this proposed rule.

The following flowchart illustrates the prioritizing process, discussed in detail below:



## Part Three—Assessment Methodology

The process by which an owner, operator, or OCMI would determine whether a vessel would need to reduce or redistribute passengers and whether it would need a new stability verification—and how soon—is laid out in detail below: First for vessels subject to the requirements of subchapter S, and second for vessels that undergo a simplified proof test.

However, there are several vessel categories for which no further assessment of passenger weight needs to be considered, with the exception that a new stability letter might be required. No immediate stability verification or change to passenger capacity is necessary if the vessel:

1. Is a sailing vessel;
2. Has a Certificate of Inspection (COI) that permits 86 percent (approximately equal to 160 pounds divided by 185 pounds) or fewer of the passengers permitted by the stability letter, and the assumed weight per person was 160 or 165 pounds;
3. Has a COI that permits 75 percent (approximately equal to 140 pounds divided by 185 pounds) or fewer of the passengers permitted by the stability letter, if operating on protected waters with a mix of men, women, and children, and the assumed weight per person was 140 pounds;
4. Is permitted to carry an amount of cargo, not including passengers, that exceeds the total weight of passengers carried; or
5. Ensures that the total weight of persons aboard the vessel does not exceed the assumed total weight of persons used to develop the stability information, which is equal to the total test weight.

*Assessment of vessels subject to the requirements of subchapter S.*

The SNAME *Ad Hoc* panel also proposed, and the Coast Guard, in turn, proposes a process for evaluating stability change in these vessels using the latest assumed average weight per person. By following the process below, the owner, operator, or OCMI could determine the urgency of each vessel's need for a re-evaluation of intact stability and prioritize the vessel accordingly. The data necessary for making the percent change and detailed loading calculations described below should be readily available, as § 78.17–22(b) requires that vessel masters have the capability to determine the vessel's draft, trim, and stability as necessary.

*Evaluation process for a vessel subject to the requirements of subchapter S.*

The following three assumptions were applied:

1. Wind heel requirements are more severe than passenger heel, and this doesn't change with an increase in weight per person. Experience has shown that passenger heel requirements in subchapter S rarely exceed wind heel requirements.

2. Each vessel meets stability requirements in its current condition, prior to assessing the effect of a per-person weight increase. Our assessment cannot take into account unauthorized changes to the vessel or its service.

3. A small amount of increase in weight or vertical center of gravity (VCG) will not adversely affect the stability of the vessel significantly.

This approach is taken from MTN 4–95 (available in the docket), which uses weight-moment calculations to assess the absolute and relative changes in displacement and centers of gravity (LCG and VCG). Those changes, in turn, can be compared to previously determined limits to evaluate the relative risk of adverse changes to the vessel's stability. To do this, a calculation is needed that relates the change in vertical weight moment caused by an increase in assumed weight per person ( $VMOM_{\text{chng}}$ ) to the lightship vertical weight moment ( $VMOM_{\text{lightship}}$ ):

$$\text{Percent Change} = \frac{VMOM_{\text{chng}}}{VMOM_{\text{lightship}}} \times 100$$

Where:

$$VMOM_{\text{chng}} = (W_{\text{paxnew}} - W_{\text{paxold}}) \times (VCG_{\text{pax}})$$

$$VMOM_{\text{lightship}} = \text{lightship weight} \times \text{lightship VCG}$$

VCG = vertical center of gravity above baseline

$W_{\text{paxnew}}$  = the number of passengers multiplied by the latest assumed average weight per person

$W_{\text{paxold}}$  = the number of passengers multiplied by the old assumed average weight per person (generally, either 160 or 165 pounds)

$VCG_{\text{pax}}$  = the overall VCG of the passengers carried above the baseline

In making the calculations, consistent units must be used. In other words, if the lightship weight is given in long tons,  $W_{\text{paxnew}}$  and  $W_{\text{paxold}}$  must be computed in long tons; if the lightship VCG is in feet,  $VCG_{\text{pax}}$  must be in feet; if in meters, use meters.

MTN 4–95 allows up to a 2 percent change in lightship weight without verifying weight-moment calculations. Additionally, an OCMI may consider the difference in VCG of the vessel and the passengers. It should be noted that a percent change of the vertical moment of less than 3 provides a value of safety corresponding to the 2 percent displacement allowed in MTN 4–95. For these reasons, if the percent change in vertical moment computed by the

methodology given above is less than 3, an OCMI could defer the stability verification to a later date, most likely the next regularly scheduled inspection. If the percent change is 3 or greater, and the vessel's most recent stability letter is more than 10 years old, detailed stability calculations should be performed to determine the degree to which, if any, an increase in total assumed passenger weight would affect the vessel's compliance with the applicable stability criteria.

*Evaluation process for a vessel undergoing a monohull simplified stability proof test.*

This process uses data obtained from the SST data form and the standards given in 46 CFR 178.330. If the data for the SST is not available, vessel measurements will be necessary to obtain the SST data or the moment to heel 1 degree ( $MH1_{\text{SST}}$ ) must be estimated as described in the steps below:

1. Using the following equation, calculate the additional sinkage in inches (centimeters) due to the increased passenger weight:

$$\text{Sinkage} = (W_{\text{paxnew}} - W_{\text{paxold}}) / W_{\text{immersion}}$$

Where:

$W_{\text{immersion}}$  = (Waterplane Area  $\times$  Water Density/K) in pounds per inch (kilograms per centimeter) (this is the weight per unit immersion); K = 12 inches per foot (100 centimeters per meter)

$W_{\text{paxnew}}$  = the number of passengers multiplied by the latest assumed average weight per person in pounds (kilograms)

$W_{\text{paxold}}$  = the number of passengers multiplied by the old assumed average weight per person used in the SST (generally, either 140 or 160 pounds) in pounds (kilograms)

Waterplane Area = Length  $\times$  Beam  $\times$  Waterplane Coefficient in square feet (square meters)

Waterplane Coefficient = 0.7 for monohulls or 0.4 for multihulls, unless a more accurate value is known

Water Density = 64 pounds per cubic foot (1,025 kilograms per cubic meter) for salt water; 62.4 pounds per cubic foot (1,000 kilograms per cubic meter) for fresh water

2. Calculate the location of the new maximum allowable immersion mark ( $i_{\text{upright-new}}$ ) above the upright load waterline by subtracting the sinkage calculated in step 1 above from the SST measured freeboard and applying the appropriate formula from 46 CFR 178.330(d). If the data for an SST is not available, the freeboard should be measured with the vessel in the condition specified in 46 CFR 178.330(a). (In summary, this is with the vessel complete in all respects, in a fully

loaded condition, and with all anticipated loads properly distributed.)

3. Calculate the existing SST moment to heel 1 degree (MH<sub>1SST</sub>) as follows:

$$MH_{1SST} = HM_{SST} / Theta_{SST}$$

Where:

Theta<sub>SST</sub> = angle between upright SST waterline and actual SST immersion point (after weight movement), in degrees = inverse tangent (2 × (i<sub>heeled</sub> - i<sub>upright</sub>/beam at the reference station)) (This is the actual heel angle caused by the heel moment applied in the SST.)

HM<sub>SST</sub> = heeling moment applied during the SST in foot-pounds (meter-kilograms)

i<sub>upright</sub> = maximum allowable immersion determined from the upright freeboard before weight movement

i<sub>heeled</sub> = actual remaining distance measured after the weight movement from the water surface to the position of i<sub>upright</sub> on the vessel

If the data for an SST is not available, the MH<sub>1SST</sub> can be estimated using the following equations:

For a vessel operating on exposed waters:

$$MH_{1SST} = 3 \times ((L \times B^3)^2) / 10^8 + (L \times B^3) / 60 + 50$$

For a vessel operating on partially protected waters:

$$MH_{1SST} = 4 \times ((L \times B^3)^2) / 10^8 + (L \times B^3) / 125 + 200$$

For a vessel operating on protected waters:

$$MH_{1SST} = 4.5 \times ((L \times B^3)^2) / 10^8 + (L \times B^3) / 250 + 250$$

Where,

L = Length in feet, and

B = Beam, in feet

4. Determine the new moment to heel 1 degree (MH<sub>1new</sub>) in foot-pounds (meter-kilograms) with the increased passenger weight as follows:

$$MH_{1new} = MH_{1SST} \times (T_{SST} / T_{new}) - VM_{new} / 57.3$$

Where:

T<sub>SST</sub> = Estimated draft during SST in feet (meters), which may be calculated as the difference between the depth to the keel and the freeboard used in step 2

T<sub>new</sub> = T<sub>SST</sub> + sinkage (calculated in step 1 above, and converted to feet (meters))

VM<sub>new</sub> = (W<sub>paxnew</sub> - W<sub>paxold</sub>) × VCG<sub>pax</sub> in foot-pounds (meter-kilograms)

VCG<sub>pax</sub> = Overall vertical center of gravity (VCG) of the passengers carried

5. Calculate new passenger heeling moment (MP<sub>new</sub>) in accordance with 46 CFR 178.330 using the latest assumed average weight per person. If the existing wind heeling moment (MW) exceeds MP<sub>new</sub>, the new draft (T<sub>new</sub>) should be used to calculate the new wind heeling moment (MW<sub>new</sub>) in accordance with 46 CFR 178.330. The greatest of the new passenger or wind heeling moments (MP<sub>new</sub> or MW<sub>new</sub>) is

divided by MH<sub>1new</sub> to determine the heel angle produced by the new heeling moment (Theta<sub>new</sub>):

$$Theta_{new} = (\text{Max} (MP_{new} \text{ or } MW_{new})) / MH_{1new}$$

6. Using the heel angle (Theta<sub>new</sub>) calculated in step 5, the height of the heeled waterline above the upright waterline (i<sub>heeled-new</sub>) with the new heeling moment is determined:  
i<sub>heeled-new</sub> = tangent (Theta<sub>new</sub>) × 2 × beam at the reference station

If i<sub>heeled-new</sub> is less than or equal to the height of the new maximum allowable immersion mark calculated in step 2 (i<sub>upright-new</sub>), the vessel would not be affected by an increase in assumed weight per person. If the value exceeds (i<sub>upright-new</sub>), the number of passengers should be reduced, or the passengers redistributed if the vessel has an upper deck, and steps 1 through 6 repeated until the immersion mark height (i<sub>heeled-new</sub>) is equal to or below the maximum allowable (i<sub>upright-new</sub>).

#### B. Weight of Passengers and Crew

New provisions on the assumed average weight per person would be added at §§ 170.090 and 178.330 and are discussed in detail at those sections of this preamble.

A new section, 171.045, would require each passenger vessel to which subchapter S intact stability requirements now apply to use the latest assumed average weight per person appropriate for the intended service. This requirement would apply immediately on the effective date of this rule, although stability verification would not be required until ten years after the most recent stability information was issued, as discussed under "Vessel Stability" above.

A new section, 178.215, would be added for vessels whose stability letter is based on the results of an SST or PSST. This section would require the owner or operator to provide the master with the total test weight, the latest assumed average weight per person, and the maximum number of persons permitted on board based on that weight.

#### C. Notes on Pontoon Vessels

The passenger capacity of pontoon vessels may not be affected if a process is followed on every voyage to ensure that the total weight of persons carried does not exceed the total test weight that was used to determine stability compliance. One example of such a process would be to weigh all the passengers as they board the vessel. The passenger capacity will be affected if such a process is not followed and the

passenger weight used on the vessel's SST was based on either 140 or 160 pounds per person. If an SST was performed on the vessel using the procedures contained in the Small Passenger Vessels Simplified Stability Test Procedure for Pontoon Vessels on Protected Waters, the results of that test, if valid, may be used to determine the new capacity based on an assumed average weight that is appropriate for the intended service. In many cases, however, a new SST will need to be performed on pontoon passenger vessels. We propose adding the requirement in § 178.210(d) that a vessel that undergoes a PSST in accordance with § 178.340 must have a stability letter issued by the Marine Safety Center.

#### D. SOLAS and Resolution A.265

Sections 170.248 and 171.001 would be revised by adding requirements concerning new vessels, which will become effective when certain amendments to the International Convention for the Safety of Life at Sea (SOLAS) come into effect on January 1, 2009. Each new vessel issued a SOLAS Passenger Ship Safety Certificate (PSSC) or a SOLAS Cargo Ship Safety Construction Certificate would have to meet the requirements of SOLAS chapter II-1, in addition to meeting the requirements concerning watertight bulkhead doors in subpart H of part 170, and subdivision and damage stability requirements. For more information on these revisions, see the discussion of § 170.015 in this preamble.

The amendments to SOLAS chapter II-1 primarily involve the harmonization of subdivision and damage stability requirements for passenger and cargo vessels. IMO Resolution A.265(VIII) (hereafter A.265) was promulgated in 1973, and contains a probabilistic damage stability method that is an alternative set of requirements for passenger vessels instead of the traditional requirements contained in existing SOLAS regulations. This optional use of A.265 has been incorporated into U.S. regulations as "Type III subdivision", as an alternative to Type I subdivision. However, we are not aware of any U.S. flag vessel that has used Type III subdivision (A.265).

Since the SOLAS chapter II-1 amendments are effectively an update of A.265, there is no need to keep A.265 as an option. Accordingly, we propose removing §§ 170.135, 171.075, and 171.082, which address A.265 and Type III subdivision. While not replacing A.265, the SOLAS chapter II-1 amendments would be accepted as an equivalent to Type I subdivision.

Operating information associated with SOLAS chapter II-1 would be added in new § 170.140.

#### *E. Corrections, Clarifications, and Updates*

In the course of this rulemaking, we identified several regulations that need to be updated or corrected, and others that could benefit from clarification. While each of these proposed rule changes will be addressed more fully in the ensuing section-by-section discussion, a summary list of the affected sections—other than those discussed in “SOLAS and Resolution A.265” above, and “American Bureau of Shipping” below—is as follows: Subpart 71.75 (heading); 71.75-1; 71.75-5; 115.900; 115.910; 115.920; 115.930; 170.001; 170.015; 170.070; 170.100; 170.105; 170.135; 170.160; 170.165; Part 170, subpart E (heading); 170.170; 170.248; 170.270; 171.001; Part 171, subpart B (heading); 171.050; Part 171, subpart C (heading); 171.060; 171.065; 171.070; 172.020; 172.070; 174.007; 174.100; 174.360; 176.900; 176.910; 176.920; 176.930; 178.115; 178.230; 178.310; 178.320; 178.325; 179.212 and 179.220.

#### *F. American Bureau of Shipping*

As one of the updates of regulations cited above, we propose removing references to the American Bureau of Shipping (ABS) from §§ 170.075, 170.080, 170.085, 170.093, 170.100, 170.110, 170.120, 170.170, 170.173, 170.175, 170.180, 170.185, 170.190, and 170.235. Procedures that the ABS uses to perform reviews of certain documents on behalf of the Coast Guard are contained in Navigation and Vessel Inspection Circulars 10-82 and 3-97. Title 46 U.S.C. 3316 authorizes the Coast Guard to accept plan review, inspections, and examinations performed by ABS for compliance with Coast Guard rules and regulations. Delegation to a recognized classification society, including ABS, of authority to perform certain functions on behalf of Coast Guard is addressed in part 8 of 46 CFR.

#### *G. Discussion of Proposed Amendments by Section*

§ 71.25-50. Existing § 71.25-50 would be redesignated as § 71.25-95, and a new section on stability verification would be added as discussed in detail earlier in this preamble under “Stability Verification.”

§ 71.50-1. The definition of “drydock examination” would be clarified to include the verification of the draft marks.

Subpart 71.75 (Heading) and §§ 71.75-1 and 71.75-5

The heading of this subpart and two of its sections would be revised to reflect that the SOLAS Passenger Ship Safety Certificate (PSSC) is issued under SOLAS 1974 provisions, that a vessel receiving a PSSC must comply with applicable SOLAS requirements, and that a vessel does not need to actually be engaged in international service but be certificated for international service to receive a PSSC.

§ 114.400. A definition of “variable load” would be added to this section. The term is used in § 115.112 for consideration of the number of persons and weight permitted on a vessel regulated by subchapter K.

The third subparagraph of the definition of “length” would be deleted because it refers only to use with the requirements of part 179, which are not applicable to vessels inspected under subchapter K.

§ 115.110. Existing provisions of paragraph (d) of this section list the factors OCMI's may consider when designating a permitted route. This list would be modified by removing a part of subparagraph (d)(3) and adding it as new subparagraph (d)(4) to explicitly call attention to the OCMI's prerogative to consider a vessel's use in weather conditions. This approach would emphasize the OCMI's authority to include operational limits on a COI.

It is not possible to accurately enumerate all combinations of safe environmental conditions on a given passenger vessel's COI. Instead, the Coast Guard has traditionally restricted small passenger vessels to operation in “reasonable operating conditions.” Defining reasonable operating conditions involves the judgment of a professional mariner having a certain degree of experience in the operation of a given size and type of vessel, and direct knowledge of the conditions to which the vessel is subject at any particular moment.

Limiting winds, speeds, and wave heights alone, however, cannot adequately define a safe operating envelope for any vessel. Many other conditions involving the vessel, its changing environment, and its response to that environment, must be constantly observed, monitored, interpreted, and responded to by the master in order to evaluate the advisability of embarking on a voyage, or continuing on a voyage when conditions progressively deteriorate. The master has the responsibility to make this determination and is bound to do so using his or her best skill and judgment.

This section, then, would emphasize the need for due diligence on the part of the master with respect to the weather, along with the other factors stipulated in this section, and would avoid unnecessary limits on the discretion of masters.

§ 115.112. This section would be revised to explicitly list the total weight of passengers, crew, and variable loads as factors an OCMI may consider when determining the total number of persons and total weight a vessel would be permitted to carry.

§ 115.505. This new section on stability verification would be added as discussed in detail earlier in this preamble, under “Stability Verification.”

§ 115.610. Two sentences would be added to paragraph (a) that would add the verification of draft marks to the actions performed at a drydock examination, as well as to ensure that the stability information provided corresponds to the draft marks. A stability letter often includes an operating restriction that limits the maximum draft amidships. The vessel's draft marks (required by § 122.602), however, might refer to a point on the vessel that differs from that used in the stability letter (for example, the bottom of the rudder or propeller). So that the master can effectively verify that the loaded vessel complies with the stability letter's maximum draft restriction, draft or loading marks must be provided that allow the master to compare the actual vessel draft with the maximum draft restriction. If the maximum draft restriction in the stability letter does not correspond to the information obtained from draft mark readings, a new stability letter with a revised restriction and/or draft marks would be needed.

§§ 115.900, 115.910, 115.920, and 115.930. These sections would be revised to reflect current practice and policy: (1) a passenger vessel need not actually be on an international voyage to be issued a SOLAS Passenger Ship Safety Certificate (PSSC) but simply be certificated for international service; (2) the Commandant no longer issues the PSSC or a SOLAS Exemption Certificate but authorizes the local OCMI to do so.

§ 122.304. Forecasted visibility and weather conditions would be added as factors to which vessel masters should give special attention.

§ 122.315. This section would be augmented to emphasize the master's duty to avoid overloading the vessel by taking into account the weight of passengers, crew, and variable loads.

If appropriate for the vessel's operation, draft-sensing devices, loading

marks, or draft marks would satisfy this requirement. Other means might include: (1) Weighing passengers and crew individually, in groups, or in total; or (2) estimating the total weight of each passenger and including an appropriate margin.

Of course, if the number of passengers permitted by the COI is significantly less than the number permitted by the stability letter, a simple passenger count would be satisfactory.

§ 122.602. This section would be revised to require each vessel that complies with subchapter S requirements to have loading marks or draft marks. A stability letter or the stability information on a COI or load line certificate normally includes freeboard and draft restrictions on operation. While most vessels are already required to have markings of some kind, this section would be revised to require each vessel that complies with the requirements of subchapter S to have loading marks or draft marks to permit the master to verify compliance with the freeboard and draft restrictions.

*Part 170, Subpart E.* As one of the corrections cited above, this subpart heading would be revised from "Subpart E—Weather Criteria" to "Subpart E—Intact Stability Criteria" to more accurately describe the contents of the subpart.

§ 170.001. Paragraph (a) would be revised to clarify that the exception provision is intended to apply only to a vessel's contracted date. This exception was and is intended to allow retroactive application of new damage stability standards in § 171.080 and is not intended to be applied to vessels other than those that are "inspected" or that are required to meet a standard contained in subchapter S. A new subparagraph would also be added to paragraph (a) to clarify that certain uninspected vessels may need to comply with stability standards contained in subchapter S because they are issued a load line certificate or are required to meet a stability standard under subpart E of part 28 of this title.

§ 170.015. In December 2006, the International Maritime Organization (IMO) adopted Resolution MSC.216(82), which is contained in SOLAS chapter II-1, to harmonize subdivision and damage stability regulations for passenger and cargo ships. Accordingly, SOLAS chapter II-1 would be added to this central incorporation by reference section and referenced in §§ 170.140, and 170.248. The International Code on Intact Stability, 2008 (2008 IS Code), which would be referenced in § 170.165, would also be added to § 170.015.

§ 170.055. A definition of "constructed" similar to that used in SOLAS for "ships constructed" would be added to this section for clarification.

A definition of "passenger fraction" would also be added to this section. Passenger fraction is the ratio of total passenger weight to total displacement. This term would be used in revised § 171.050, which addresses intact stability requirements for a mechanically propelled or a nonself-propelled vessel. It would also be used in proposed § 171.052 concerning stability criteria for vessels of unusual proportion and form, specifically with regard to passenger distribution criteria.

For some small passenger vessels built of light materials, the passenger fraction can be as high as 50 percent. Such high passenger fractions were not envisioned when existing intact stability criteria were developed. Therefore, new requirements associated with passenger fractions greater than 15 percent would be included in proposed § 171.052.

§ 170.070. Paragraph (b) would be modified to clarify that subpart C of part 170 applies to a vessel when the subchapter under which it is inspected so directs.

§ 170.090. An erroneous reference to § 170.098 would be removed. Additionally, new provisions would be added governing the calculation of an assumed average weight per person and allowances for loads. These provisions replace the outdated assumed average weights currently contained in § 178.330.

The Coast Guard concurred with the NTSB's March 7, 2006 recommendation (Recommendation M-06-05, available in the docket) to require that passenger capacity of domestic passenger vessels be calculated based on a statistically representative average passenger weight standard that is periodically updated. This section of the proposed rule sets forth the formula used to calculate the average weight per person published in the **Federal Register** on April 26, 2006, which resulted in a figure of 185 pounds. The formula relies on the most recent mean body weight data available from the National Health and Nutrition Examination Survey (NHANES), which is expected to be released periodically by the National Center of Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). As the U.S. population weight data is updated periodically by the CDC, the formula proposed in this rule would compute the latest, statistically representative, assumed average weight per person which will be used to evaluate the stability of passenger vessels.

This notice and comment rulemaking provides the public the opportunity to comment on the formula and calculation methodology the Coast Guard proposes to use to determine the assumed average weight per person, as well as subsequent adjustments to the average weight per person using the same formula.

When the CDC/NHANES releases an update regarding the average weight of adults in the United States, the Coast Guard, without further rulemaking, would publish a notice in the **Federal Register** of the availability of that data and the associated calculation of the average weight per person, according to the proposed formula. Vessel owner/operators and masters of passenger vessels would be expected to take this new weight into consideration 60 days after the notice would be published, and load their vessels accordingly.

The CDC NHANES program is a widely accepted and authoritative source for weight data on the U.S. population. The 2004 CDC NHANES report on surveys conducted in the United States between 1960 and 2002 stated that "on average, both men and women gained more than 24 pounds between the 1960s and 2002." According to this report, the mean weight of children of all ages also increased substantially between 1963 and 2002. Teenage boys and girls aged 12-17 increased 15 and 12 pounds, respectively, to mean weights of 141 and 130 pounds, respectively, between the 1960s and 2002. (See CDC *Advance Data*, Number 347, dated October 27, 2004, available at: <http://www.cdc.gov/nchs/products/pubs/pubd/ad/ad.htm>.)

For a 50/50 male/female mix and for adults between 20 and 74 years old, an average weight of 177.7 pounds without clothing was calculated from the data released in the NHANES report. An average weight of approximately 185 pounds is obtained when the most current CDC average weight of 177.7 pounds is added to the Federal Aviation Administration (FAA) average clothing weight of 7.5 pounds. (See FAA Advisory Circular (AC) 120-27E, *Aircraft Weight and Balance Control*, dated June 10, 2005, paragraph 201 (superseding FAA AC 120-27D), available in the docket). Approximately the same weight is obtained when the CDC average adult weight gain of 24 pounds is added to the 160-pound average established in the 1960s.

The accuracy of this result is further confirmed by the weights recommended by government authorities in Canada and New Zealand. A 2003 New Zealand Civil Aviation Authority survey of passenger weights reported an average

weight without carry-on bags or personal effects of 176.8 pounds. Transport Canada, Canada's Federal transportation agency, recommends assuming an average weight of 182.5 pounds per person in summer and 188.5 pounds in winter for small aircraft. Transport Canada's weights included an allowance for clothing, but not luggage. (These documents are available in the docket.)

The Coast Guard also considered a report by the Coast Guard Passenger Weight Working Group. The report, dated May 19, 2005, available in the docket (and mentioned earlier in this preamble under "Background and Purpose"), used an average passenger weight of 190 pounds to assess the potential impacts of regulatory changes. This average passenger weight was based on the FAA's use in their Advisory Circular AC 120-27D of an average winter passenger weight of 189 pounds, not including carry-on bags. It was noted in the report to be conservative. The current FAA Advisory Circular, AC 120-27E, also uses an average winter passenger weight of 189 pounds without carry-on bags, and includes allowances of 10 pounds each for clothing and personal items. (See AC 120-27E, paragraphs 201 and 205, and Tables 2-1 and 2-2.)

The FAA arrived at the standard average passenger weights used in AC 120-27E after performing certain mathematical calculations using the CDC's NHANES data, rather than relying on the average weights published by the CDC in *Advance Data* Number 347. (See AC 120-27E, Appendix 2). However, to achieve safe vessel stability standards without restricting passenger vessel operators unnecessarily, the most accurate weight data available must be subjected to sound naval architecture analysis, rather than simply mimicking the product of calculations unrelated to vessel stability. Reliance on CDC data to update pertinent vessel stability regulations now and in the future satisfies the need for accurate weight information.

#### Additional Considerations of the Assumed Average Weight per Person for Vessels on Protected Waters

The current Coast Guard regulation associated with the performance of a simplified stability test (SST) permits the weight of one person to be considered as 63.5 kilograms (140 pounds) if the vessel operates exclusively on protected waters and the passenger load consists of men, women, and children (46 CFR 178.330(a)(4)(ii)). Experience has shown that many vessels

whose stability is based on this passenger weight standard do operate with such a mix of passengers. Many of these vessels, however, occasionally carry a passenger load consisting predominantly of adults, and some vessels do so most of the time.

We propose removing the weight standard currently used in § 178.330 and, instead, adding provisions to § 170.090 that would utilize data from the most recent NHANES survey to arrive at a more accurate average weight per person. However, the proposed rule would be unnecessarily inflexible if it did not consider vessels that normally operate with a mix of men, women, and children on protected waters. To address cases where the owners of such vessels can effectively manage vessel stability to ensure that their vessels are not overloaded, the proposed rule permits the OCMI to agree, in writing, to the use of other values. For example, excursion vessels whose businesses cater to families or child-oriented themes may be able to show that they will carry a high percentage of children, who weigh far less than the assumed average weight per person of adults.

As discussed above, fundamental differences between the marine and aviation fleets make a broad and uncritical adoption of FAA passenger weight analysis unrealistic. With the OCMI's written agreement, however, if feasible and appropriate for their service, some vessels may be able to utilize FAA methods to determine the weight of passengers and bags. Those methods are described in FAA AC 120-27E.

Another possible solution would allow the vessel operator to manage stability by weighing each passenger or all passengers together prior to embarkation; or asking each passenger his or her weight, adding an appropriate margin for clothing or understated weight, and verifying that the passenger weight tally does not exceed the total permitted passenger weight.

§ 170.105. This section would be revised to reflect the correct application of subchapter T vessels.

§ 170.135. We propose removing this section concerning Type III subdivision in its entirety. See the discussion earlier in this preamble under "SOLAS and Resolution A.265."

§ 170.140. See the discussion of § 170.015 in this preamble.

§ 170.160. To correct the erroneous reference to § 178.330, paragraph (c)(3) would be revised to indicate that performance of any of the simplified stability tests described in part 178 would be an acceptable alternative to the demonstration of compliance with

the standards of subpart E. Paragraph (d) would be added so that vessels complying with applicable provisions of the International Code on Intact Stability, 2008 (2008 IS Code), enunciated in new § 170.165, would be considered equivalent to complying with the requirements of §§ 170.170 and 170.173.

§ 170.165. This section would be added to implement the Introduction and Part A of the 2008 IS Code for vessels certificated for international service. Paragraph (a) of this section would codify the requirements that are expected to be adopted as amendments to both the 1988 Load Line Protocol and SOLAS for vessels to which either of these IMO agreements apply.

Paragraph (b) would make compliance with the 2008 IS Code an alternative for vessels to which paragraph (a) does not apply.

§ 170.170. This section would be revised to correct a deficiency in the current regulations. Section 170.170 contains what are commonly referred to as "wind heel" requirements for intact stability. The formulation for a minimum required metacentric height (GM) currently contained in this section facilitated easy evaluation and verification that the vessel does not exceed the limiting angle of 14 degrees, or one-half the freeboard to the deck edge, without the more involved process of calculating righting and heeling arm curves to determine the heel angle. While this formulation reflects a common simplification that was and is appropriate for conventional ships—and is simple to compute—there exist some unusual combinations of beam, freeboard, wind profile area, and metacentric height for which the existing equation is not appropriate.

For example, calculations submitted to the Marine Safety Center (MSC) for a vessel with low freeboard and a high wind profile area a few years ago showed compliance with the minimum metacentric height requirement, but the MSC's verifying calculations showed the vessel would capsize when the required wind heeling moment was applied. The reason for this discrepancy was that the angle of deck edge submergence was less than 5 degrees, which caused the maximum righting arm to occur at such a low angle that the required righting moment to maintain equilibrium could not be obtained.

The proposed change would correct this deficiency by requiring the calculation of righting arm curves. This change would implement the intent of this regulation, which is to restrict the angle of heel caused by wind pressure that varies according to stability route.

§ 170.248. Paragraph (a) of this section would be revised and a new paragraph would be added to invoke SOLAS watertight bulkhead door requirements on vessels issued a SOLAS safety certificate in addition to the specific requirements already contained in part 170.

§ 170.270. This section would be revised to update the ASTM standards incorporated by reference.

*Part 171 (subpart headings).* Subparts B and C would be re-titled “Intact stability” and “Subdivision and damage stability”, respectively, to more accurately describe the contents of those subparts.

§ 171.001. This section would be modified to require a passenger vessel certificated for international service and constructed on or after January 1, 2009, to comply with the newly revised regulations of SOLAS chapter II-1. For the purposes of this section, those SOLAS requirements are equivalent to the requirements of part 171 when applied to such vessels. This section would also be modified to reflect the current application of part 171 to certain vessels inspected under subchapter T.

§ 171.012. This new section would be added to incorporate by reference into part 171 SOLAS chapter II-1 and the 2008 IS Code. SOLAS chapter II-1 would be referenced in § 171.001 and the 2008 IS Code in § 171.050.

§ 171.045. See the discussion of this section under “Weight of Passengers and Crew” earlier in this preamble.

§ 171.050. The heading of this section would be revised to more accurately describe the contents of the section as relating specifically to passenger heel. The revised section would also establish the minimum standard for intact stability of a mechanically propelled or nonself-propelled vessel as an angle of heel not greater than 14 degrees, or the angle of heel at which the deck edge is first submerged, whichever is less. Angle of heel is more accurate than the current standard, which relies upon a simplified calculation of metacentric height. Moreover, the current standard was intended to approximate angle of heel, and was adopted because angle of heel calculations were considered in the past to be too onerous for purposes of this regulation. With current computing capabilities, however, use of the more accurate standard would be appropriate. Additionally, paragraph (c) would be added so that compliance with the requirements in the 2008 IS Code for passenger ships would be considered equivalent to complying with the provisions of paragraph (a) governing passenger heeling.

§ 171.052. Technological improvements in vessel design and construction have resulted in some vessels that weigh significantly less than their more conventional predecessors. Intact stability criteria for passenger vessels did not consider vessels of light construction, for which the total weight of passengers and their effects could constitute 50 percent or more of the total displacement weight. Studies of passenger distribution have been performed that show that the standard currently contained in § 170.173 does not provide a margin of safety for vessels of light construction to the same degree as for those vessels for which the standard was developed.

Accordingly, this new section would be added to specify stability requirements for vessels of unusual proportion and form in order to withstand certain operating conditions, and also to take into account variations in passenger loading. The addition of passenger distribution criteria will bring the stability analysis of domestic vessels in line with the methodology employed by the 2008 IS Code, and account for a wide variety of hull forms not envisioned by the current regulations. See the discussion of “passenger fraction” at § 170.055.

§ 171.060. We propose removing the text concerning Type III subdivision. See the discussion earlier in this preamble under “SOLAS and Resolution A.265.”

§ 171.065. The second equation in this section is erroneous, and would be corrected. When subchapter S regulations were originally published in 1983, the equation was correct; however, a printing error—changing the term  $P_1$  to  $P$ —was introduced in subsequent editions of the CFR. We propose taking this opportunity to correct the error.

§ 171.070. The current regulation is silent concerning the minimum spacing of watertight bulkheads for vessels less than 143 feet in length that make international voyages. These vessels are normally required to meet SOLAS requirements for such spacing, which are the same as for vessels that are 143 feet or more in length. We propose taking this opportunity to correct this omission.

§ 171.075. We propose removing this section concerning Type III subdivision in its entirety. See the discussion earlier in this preamble under “SOLAS and Resolution A.265.”

§ 171.080. This section, which specifies damage stability standards for vessels with Type I or Type II subdivision, would be revised by removing “75 kilograms” as an assumed

average passenger weight, and referring to § 170.090 instead, which uses the most current NHANES data.

§ 171.082. We propose removing this section—regarding Type III subdivision—in its entirety. See the discussion earlier in this preamble under “SOLAS and Resolution A.265.”

§ 172.020. This section would be revised to include MARPOL 73/78 as a standard to be incorporated by reference.

§ 172.070. This section would be revised to clarify the date after which vessels must comply with the intact stability requirements of the International Convention for the Prevention of Pollution from Ships, 1973, (as amended by the Protocol of 1978 (MARPOL 73/78) Annex I). The revised section would also reflect the renumbering of regulations that occurred in MARPOL 73/78.

§ 174.007. This new section would be added to incorporate by reference SOLAS chapter II-1. SOLAS chapter II-1 would be referenced in § 174.360 for the reasons discussed below.

§ 174.100. This section would be revised to update the ASTM standards incorporated by reference.

§ 174.360. We are taking the opportunity to update this section, as cited above. The amendments to SOLAS chapter II-1 discussed earlier in this preamble under “SOLAS and Resolution A.265” also apply to dry cargo ships constructed on or after January 1, 2009. Since § 174.360 applies to dry cargo ships built before this date as well, we propose updating this section to properly address the requirements that are applicable to dry cargo ships constructed both before and after January 1, 2009. See the discussion at § 170.015 earlier in this preamble.

§ 175.400. Definitions of “variable load” and “total test weight” would be added to this section. Both terms are used in § 176.112 for consideration of the number of persons and weight permitted on a vessel inspected under subchapter T, and in the simplified stability proof test set out in § 178.330.

§ 176.110. As discussed in § 115.110 of this preamble, this section lists the factors OCMI may consider when designating a permitted route.

§ 176.112. This section would be revised to explicitly list the total weight of passengers, crew, and variable loads as factors an OCMI may consider when determining the total number of persons and total weight a vessel would be permitted to carry.

§ 176.505. This new section on stability verification would be added as discussed in detail earlier in this preamble under “Stability Verification.”

§ 176.610. Two sentences would be added to paragraph (a) that would add the verification of draft marks to the actions performed at a drydock examination, as well as make sure that the stability information provided corresponds to the draft marks provided. See the discussion of § 115.610 earlier in this preamble.

§ 176.900, 176.910, 176.920, and 176.930. See the discussion of §§ 115.900, 115.910, 115.920, and 115.930 in this preamble, where we discuss proposed revisions to reflect current practice and policy regarding SOLAS certificates.

§ 178.115. This section would be modified to allow application of subpart B to existing vessels.

§ 178.210. Paragraphs (a), (b) and (c) of this section would be revised to clarify what stability information is necessary for a vessel to meet intact stability standards, and a new paragraph (d) would add the requirement for an MSC-issued stability letter, as discussed in "Notes on Pontoon Vessels" above.

§ 178.215. See the discussion earlier in this preamble under "Weight of Passengers and Crew."

§ 178.230. Paragraph (b) of this section would be revised, and a new paragraph (c) added, to expand the information required of vessels showing compliance with subchapter S, including information required in part 170 of that subchapter.

§ 178.310. This section would be revised to clarify the intact stability requirements for vessels subject to subchapter S, as well as those that can use subchapter T requirements. In addition, we would add the option of another requirement as stipulated by the Commanding Officer, Marine Safety Center. Finally, the existing option to use an SST for vessels carrying not more than 150 passengers would be removed, as the general applicability of subchapter T (see 46 CFR 175.100) already excludes vessels carrying more than 150 passengers. A figure would be added to assist users in understanding these requirements.

§ 178.320. We propose clarifying in this section that subchapter S stability requirements, or requirements determined by the Commanding Officer, Marine Safety Center, apply to all inspected passenger vessels that are not explicitly described and excepted in § 178.320. For vessels that are described in this section, the performance of a simplified stability test is an option. However, for vessels carrying 49 passengers or fewer, the cognizant OCMI has the authority to require compliance with subchapter S standards, or to apply another standard

in lieu of the simplified stability test. Specifically, we propose revising redesignated paragraph (b) to clarify that a vessel whose stability cannot be adequately assessed by other means must be shown by design calculations to meet the applicable intact stability requirements of subchapter S.

For readability, we propose moving the explanation of the simplified stability test to the beginning of the section rather than the end. For consistency, we propose moving from § 178.325 the list of restrictions for a monohull sailing vessel undergoing a simplified stability test to this section. Further, we propose adding the option of an SST for certain flush-deck non-sailing catamarans.

We also propose adding to § 178.320 restrictions on the application of a pontoon simplified stability proof test (PSST). These proposed restrictions on the application of the PSST are based in part on a study of twin hull pontoon passenger vessels, entitled *Study on the U.S. Domestic Intact Stability and Subdivision Requirements for Twin Hull Pontoon Passenger Boats Less Than 65 Feet in Length*, which is available in the docket as indicated in the **ADDRESSES** section. A table would be added to clarify applicability requirements.

§ 178.325. For consistency, we propose revising this section to move the list of restrictions for a monohull sailing vessel undergoing an SST to § 178.320. In addition, we would clarify that the performance of a simplified stability proof test is optional, as provided in § 178.320.

§ 178.330. New provisions would be added governing the assumed average weight per person to be used as well as allowances for loads on small passenger vessels. The latest assumed average weight per person would replace the outdated assumed average weights previously contained in § 178.330, and would refer to § 170.090, which would be based on the latest weight data available from the National Center for Health Statistics' National Health and Nutrition Examination Survey (NHANES). For further information on the basis for these revisions, see the discussion of § 170.090 in this preamble.

§ 178.340. This section would be revised to codify existing policy on pontoon vessel intact stability, clarify those requirements, and improve consistency of application. These revisions include a requirement that when a PSST is performed, each fuel, water, and sewage tank be full, and that the simulated load of passengers, crew, and other loads be distributed to provide normal operating trim.

Additionally, procedural changes to improve the accuracy of the test would be made based on recent detailed analyses of multihull stability characteristics that were not previously available. The organization of the revised section would align with that of § 178.330, which concerns the SST generally for monohull vessels.

§ 179.15. This new section would be added to incorporate by reference SOLAS chapter II-1. SOLAS chapter II-1 would be referenced in § 179.212 for the reasons discussed below.

§ 179.212. This section has been revised to clarify that the "simplified" subdivision requirements of part 179 can only be used in conjunction with the "simplified" intact stability requirements of part 178, and vice versa. A new paragraph would also be added to this section to require a passenger vessel constructed on or after January 1, 2009, intended to make international voyages, and issued a SOLAS PSSC, to meet applicable requirements of SOLAS chapter II-1 instead of the subdivision and damage stability requirements of this section. For the purposes of this section, those SOLAS requirements are equivalent to the requirements of this part when applied to such vessels. For additional information, please see the discussion in § 171.001 of this preamble.

§ 179.220. To enhance reliability and consistency, we propose adding a paragraph requiring that the calculations specified by this section be submitted to the Marine Safety Center for review and approval. In addition, we are taking this opportunity to correct the use of confusing, repeated symbols in paragraph (a).

§ 185.304. Forecasted visibility and weather conditions would be added as factors to which vessel masters should give special attention. A new paragraph would also be added requiring masters of vessels not greater than 65 feet in length to have means available to monitor marine broadcasts.

§ 185.315. A new paragraph would be added to this section to emphasize the master's duty to avoid overloading the vessel by taking into account the weight of passengers, crew, and variable loads. Please see the detailed discussion in § 122.315 of this preamble regarding satisfactory means by which the master may accomplish this.

§ 185.602. This section would be revised to require each vessel that complies with subchapter S requirements to have loading marks or draft marks. A stability letter or stability information placed on a COI or load line certificate normally includes freeboard and draft restrictions on operation.

While a very high proportion of vessels already have marks, every vessel whose stability approval was issued in accordance with subchapter S should have loading or draft marks to permit the master to verify compliance with the freeboard and draft restrictions. See the discussion of § 115.602 earlier in this preamble.

#### VI. Incorporation by Reference

Material proposed for incorporation by reference appears in §§ 170.015, 171.012, 172.020, 174.007 and 179.15. You may inspect this material at U.S. Coast Guard Headquarters where indicated under **ADDRESSES**. Copies of the material are available from the sources listed in §§ 170.015, 171.012, 172.020, 174.007 and 179.15.

Before publishing a binding rule, we will submit this material to the Director of the Federal Register for approval of the incorporations by reference.

#### VII. Regulatory Analyses

We developed this proposed rule after considering numerous statutes and executive orders related to rulemaking. Below we have summarized our analysis based on 13 of these statutes or executive orders.

##### A. Regulatory Planning and Review

This proposed rule is not a significant regulatory action under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget (OMB) has not reviewed it under that Order. Nevertheless, we have prepared a Preliminary Regulatory Analysis of potential costs and benefits which is available in the docket where indicated under the **ADDRESSES** section of this preamble. A summary of the analysis follows:

The Coast Guard proposes to amend its regulations governing stability requirements and the maximum number of passengers that may safely be permitted on board a vessel inspected and certificated under 46 CFR subchapters H, K or T. To calculate vessel stability and the maximum number of persons allowed on board, Coast Guard regulations currently use an average weight per person of either 160 or 140 pounds, depending on vessel route and mix of passengers. These figures were set in the 1960s. In 2004, however, the Centers for Disease Control and Prevention (CDC) released findings that the average mean body weight for men and women had increased by 24 pounds since the 1960s. Therefore, this notice of proposed rulemaking (NPRM)

is intended to update the average weight per person used in both intact stability and subdivision and damage stability compliance for vessels, and also in calculating the maximum number of passengers permitted on board.

Based on Coast Guard data, we estimate this proposed rule would affect 6,073 inspected passenger vessels. These vessels would all be required to have updated stability letters. Of these vessels, 1,140 would require both a new stability test and a reduction in maximum passenger load to obtain an updated stability letter. Additionally, 3,542 vessels would require either a new stability test or a stability recertification, but would not need to reduce maximum passenger load. Finally, 1,391 vessels would require no additional stability test or recertification and no reduction in passenger load in order to receive an updated stability letter.

We estimate the non-discounted first-year and recurring costs to be about \$10 million and \$2.5 million, respectively. We estimate the discounted ten-year cost of this rulemaking to be \$24.6 million at a seven percent discount rate and \$28.7 million at a three percent discount rate. The annualized costs over the ten-year period are \$3.5 million at a seven percent discount rate and \$3.36 million at a three percent discount rate.

##### B. Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601–612), we have considered whether this proposed rule would have a significant economic impact on a substantial number of small entities. The term “small entities” comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000.

An Initial Regulatory Flexibility Analysis (IRFA) that examines the impacts of the rule on small entities is discussed below. Under section 603 of the Regulatory Flexibility Act, an IRFA must describe the impact of the proposed rule on small entities and contain the following:

1. A description of the reasons why action by the agency is being considered;
2. A succinct statement of the objectives of, and legal basis for, the proposed rule;
3. A description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply;
4. A description of the projected reporting, recordkeeping and other

compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;

5. An identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap or conflict with the proposed rule; and,

6. A description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities.

We have discussed many of these issues at length in other sections of the NPRM. We refer the reader to the applicable sections of the NPRM for more detail. We have prepared an IRFA of the potential impacts of the proposed rule on small entities which is available in the docket where indicated under the **ADDRESSES** section of this preamble. A summary of the IRFA follows:

##### Number of Small Entities Affected

Entities that would be affected by the proposed rule are owners and operators of U.S.-inspected, U.S. flag passenger vessels. To determine which of the affected entities are small, we used public and proprietary databases to determine employee size and annual revenues of the entities and the North American Industry Classification System (NAICS) codes to classify the entities. We then applied the United States Small Business Administration (SBA) criteria for classifying small businesses to the associated NAICS code for a particular entity, and were able to determine whether the entity would be classified as small.

Of the affected population of approximately 6,073 vessels (owned by 5,760 U.S. entities) that would comply with this proposed rule, we took a sample of 156 small companies from the total population of companies that potentially own or operate these vessels. We researched approximately 900 companies in order to obtain the 156 small businesses that were required to meet our confidence level. We excluded companies that did not have the requisite data to allow us to make a determination on whether a company was small.

##### Types of Entities Affected

We classified small businesses by the NAICS code for those businesses that had known company information, and determined whether a business was small by using the SBA size standards matched to the NAICS codes. We analyzed businesses with 26 different

NAICS codes and found that about 75 percent of passenger vessels were owned by companies who operate recreational and sightseeing businesses. Of the small businesses that we analyzed, 38 percent are classified as “scenic and sightseeing transportation” companies. “Recreation and amusement” companies represent about 11 percent of the companies. “Travel agencies” and “tour operators”

represent 11 percent. The remaining 25 percent of the small businesses that we analyzed are comprised of 21 different NAICS codes. The largest percent of the remaining 25 percent were “inland water transportation” and “boat dealers.”

To estimate the impact on small businesses, we identified the vessels operated by each company. These vessels were assessed by naval

architects as to the likely impact of an updated average weight per person on their stability calculations. We then categorized the vessels into cost categories similar to those in Table 1 which are further detailed in the Preliminary Regulatory Analysis and the Initial Regulatory Flexibility Analysis (available in the docket).

IMPACT OF UPDATED PASSENGER WEIGHT STANDARD ON SMALL BUSINESSES BY CATEGORY

Category	Description of impact	No. of vessels	Passenger reduction
1 .....	Vessels that would incur a reduction in passenger capacity, based on new stability tests or calculations, or based on existing stability test data, and would incur recertification costs for intact and subdivision and damage stability.	34	315
2 & 3 .....	Vessels that would not incur a reduction in passenger capacity, but would have restrictions on the number of passengers on higher decks based on new or existing stability test data or calculations, and would incur recertification costs, and vessels that would not incur a reduction in passenger capacity, but would require new stability information to be issued based on new or existing stability tests or calculations, and would incur recertification costs.	91	0
4 .....	Vessels that would not incur a reduction in passenger capacity, based on metrics that show that the effect of increased assumed passenger weight would be sufficiently small that no recertification action would be necessary.	31	0
Totals .....		156	315

We estimated the cost impact on annual revenue for each entity by category of vessel cost. The analysis shows that 81 percent of affected small entities would have an impact of less than one percent of estimated revenue and 19 percent of affected small entities would have an impact of one to two percent of revenue.

At this time, the Coast Guard is seeking comments on whether this proposed rule would have a significant economic impact on a substantial number of small entities. If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this rule would have a significant economic impact on it, please submit a comment to the Docket Management Facility at the address under **ADDRESSES**. In your comment, explain why you think it qualifies and how and to what degree this rule would economically affect it.

**Other Federal Rules**

The requirements in this proposed rule do not overlap with provisions of any other agency.

**Regulatory Alternatives**

The goal of this NPRM is to establish the appropriate measures when conducting stability tests. The no-action alternative is to ignore the increase in weight of the average American and to calculate stability with inaccurate data.

A possible alternative is to allow the OCMI to deal with each individual vessel on a case-by-case basis without any national standard. The likely result would be a non-uniform weight standard, with vessels that change location failing to meet local requirements.

We address the projected reporting and recordkeeping requirements as well as the type and professional skills necessary for the preparation of reports and records in the cost analysis and Paperwork Reduction Act sections of this report.

**C. Assistance for Small Entities**

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104-121), we want to assist small entities in understanding this proposed rule so that they can better evaluate its effects on them and participate in the rulemaking. If the rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please consult Mr. William Peters, U.S. Coast Guard, Office of Design Engineering Standards, Naval Architecture Division (CG-5212), telephone 202-372-1371. The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency’s responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1-888-REG-FAIR (1-888-734-3247).

**D. Collection of Information**

This proposed rule would call for a collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). As defined in 5 CFR 1320.3(c), a “collection of information” comprises reporting, recordkeeping, monitoring, posting, labeling, and other, similar actions. The title and description of the information collections, a description of those who must collect the information, and an estimate of the total annual burden follow. The estimate covers the time for reviewing instructions, searching existing sources of data, gathering and maintaining the data needed, and completing and reviewing the collection.

This proposed rule would call for revisions of two collections of information under the Paperwork

Reduction Act of 1995 (44 U.S.C. 3501–3520). 46 CFR 78.121, 115.306, 170.120, and 176.306 require the collection of information. The updated average weight per person would require revisions of the existing OMB-approved collections of information.

OMB Control Number: 1625–0064.

*Title:* Plan Approval and Records for Subdivision and Stability Regulations—Title 46 CFR Subchapter S.

*Summary of the Collection of Information:* This collection of information requires owners, operators, or masters of certain inspected vessels to obtain and/or post various documents as part of the Coast Guard commercial vessel safety program. The collection also requires the reporting of certain information.

*Need for Information:* The Coast Guard needs this information to determine whether an entity meets the statutory requirements.

*Proposed Use of Information:* The Coast Guard would use this information to determine whether an entity meets the statutory requirements.

*Description of the Respondents:* Owners, operators, and/or masters of passenger vessels.

*Burden of Response:* The burden of this proposed rule for this collection of information is the provision of documentation of stability analysis and posting of a stability letter. This collection of information applies to all vessels that comply with subchapter S. This includes vessels inspected under 46 CFR subchapter H or K and some vessels inspected under subchapter T. We estimate 1,874 vessels comply with subchapter S. During this period, we estimate the total number of respondents is 1,388.

*Estimate of Total Annual Burden:* The existing OMB-approved total annual burden is 4,539 hours. The revision includes a one-time annual burden that would be approximately 5,791 hours. The total annual burden is estimated to be 10,330.

OMB Control Number: 1625–0057.

*Title:* Small Passenger Vessels—Title 46 Subchapters K and T.

*Summary of the Collection of Information:* This collection of information requires information necessary for the proper administration and enforcement of the program on safety of commercial vessels as it affects small passenger vessels.

*Need for Information:* The Coast Guard needs this information to determine whether an entity meets the statutory requirements.

*Proposed Use of Information:* The Coast Guard would use this information to determine whether an entity meets the statutory requirements.

*Description of Respondents:* Owners, operators, and/or masters of small passenger vessels.

*Burden of Response:* The burden of this proposed rule for this collection of information is the posting of a stability letter, as required by 46 CFR 115.306 (subchapter K) or 46 CFR 176.306 (subchapter T). Of the 5,487 respondents, there are 3,669 vessels inspected under 46 CFR subchapters K or T that would need to post a new stability letter.

*Estimate of Total Annual Burden:* The existing OMB-approved annual burden, related to the posting of a stability letter, is 11 hours. The revision includes a one-time increase in the annual burden of approximately 305 hours to post the new stability letter.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), we will submit a copy of this proposed rule to the Office of Management and Budget (OMB) for its review of the collection of information.

We ask for public comment on the proposed collection of information to help us determine how useful the information is; whether it can help us perform our functions better; whether it is readily available elsewhere; how accurate our estimate of the burden of collection is; how valid our methods for determining burden are; how we can improve the quality, usefulness, and clarity of the information; and how we can minimize the burden of collection.

If you submit comments on the collection of information, submit them both to OMB and to the Docket Management Facility where indicated under **ADDRESSES**, by the date under **DATES**.

You need not respond to a collection of information unless it displays a currently valid control number from OMB. Before the requirements for this collection of information become effective, we will publish notice in the **Federal Register** of OMB's decision to approve, modify, or disapprove the collection.

#### *E. Federalism*

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them.

The proposed rule would be issued under authority conferred on the Coast Guard by Chapter 33 of Title 46 United

States Code (U.S.C.). Chapter 33 of Title 46, U.S.C. describes the regimen of regulation for vessels “subject to inspection” by the U.S. Coast Guard. Vessels “subject to inspection” is a term of art developed by Congress. It refers to various types of vessels listed in 46 U.S.C. 3301 subject to a comprehensive, permissive regimen of Federal regulation. By contrast, “uninspected vessels,” such as most commercial fishing vessels and recreational vessels, are still subject to Coast Guard regulation, but under a much less comprehensive and prescriptive scheme of Federal regulation. The U.S. Supreme Court has long recognized the preemptive impact of Federal regulations in the field of inspected vessels. See, for example, *Kelly v. Washington ex rel Foss*, 302 U.S. 1 (1937) and *Locke*, 529 U.S. 113–116. Therefore, Coast Guard regulations issued under the authority of 46 U.S.C. 3306 in the areas of design, construction, alteration, repair, operation, superstructures, hulls, fittings, equipment, appliances, propulsion machinery, auxiliary machinery, boilers, unfired pressure vessels, piping, electric installations, accommodations for passengers and crew, sailing school instructors, sailing school students, lifesaving equipment and its use, firefighting equipment, its use and precautionary measures to guard against fire, inspections and tests related to these areas and the use of vessel stores and other supplies of a dangerous nature have preemptive effect over state regulation in these fields.

Title 33 U.S.C. 3301 subjects passenger vessels to Coast Guard inspection, and 33 U.S.C. 3306 provides the Coast Guard with clear authority to establish safety regulations for such vessels. Our proposed rule would revise and update stability standards for passenger vessels subject to Coast Guard regulations covered by 46 CFR subchapters H, K or T. These factors support the Coast Guard's determination herein that States may not regulate within the categories covered by this proposed rule, and the Coast Guard hereby determines that if States were to regulate on these subjects it would frustrate the purpose of these rules, which is to establish a uniform national scheme as directed by Congress. Therefore, under E.O. 13132, this proposed rule would not have an implication under federalism.

#### *F. Unfunded Mandates Reform Act*

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In

particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of \$100,000,000 or more in any one year. Though this proposed rule would not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

#### *G. Taking of Private Property*

This proposed rule would not effect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

#### *H. Civil Justice Reform*

This proposed rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

#### *I. Protection of Children*

We have analyzed this proposed rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and would not create an environmental risk to health or risk to safety that might disproportionately affect children.

#### *J. Indian Tribal Governments*

To determine whether the proposed rule would have an impact on any Indian tribal governments, we queried MISLE to obtain a list of inspected vessels potentially owned or operated by Indian tribes. The list was augmented by a thorough Internet search. The electronic file for each vessel was then examined for any relationship to a tribal organization. Additionally, we questioned Coast Guard field units to determine whether the cognizant OCMIs were aware of any tribally owned vessels.

Although we found one vessel that was confirmed to be owned by an Indian tribe, there would be no impact to that vessel from this proposed rule. Consequently, we determined that this proposed rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it would not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

#### *K. Energy Effects*

We have analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a "significant energy action" under that order and it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

#### *L. Technical Standards*

The National Technology Transfer and Advancement Act (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the OMB, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This proposed rule uses the following voluntary consensus standards: American Society for Testing and Materials (ASTM) and Military Specification, Naval Publications and Forms Center, Code 1052. The proposed sections that reference these standards and the locations where these standards are available are listed in §§ 170.015, 170.270, 174.007 and 174.100.

If you disagree with our analysis of the voluntary consensus standards listed above or are aware of voluntary consensus standards that might apply but are not listed, please identify them in a comment to the Docket Management Facility at the address under **ADDRESSES** and explain why they should be used.

#### *M. Environment*

We have analyzed this proposed rule under Commandant Instruction M16475.ID and Department of Homeland Security Management Directive 5100.1, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA)(42 U.S.C. 4321-4370f), and have made a preliminary determination under the Commandant Instruction that this action is not likely to have a

significant effect on the human environment. A preliminary "Environmental Analysis Check List" supporting this preliminary determination is available in the docket where indicated under the "Public Participation and Request for Comments" section of this preamble. We seek any comments or information that may lead to the discovery of a significant environmental impact from this proposed rule.

#### **List of Subjects**

##### *46 CFR Part 71*

Marine safety, Passenger vessels, Reporting and recordkeeping requirements.

##### *46 CFR Part 114*

Marine safety, Passenger vessels, Reporting and recordkeeping requirements.

##### *46 CFR Part 115*

Fire prevention, Marine safety, Passenger vessels, Reporting and recordkeeping requirements.

##### *46 CFR Part 122*

Marine safety, Passenger vessels, Penalties, Reporting and recordkeeping requirements.

##### *46 CFR Part 170*

Marine safety, Reporting and recordkeeping requirements, Vessels, Incorporation by reference.

##### *46 CFR Part 171*

Marine safety, Passenger vessels, Incorporation by reference.

##### *46 CFR Part 172*

Cargo vessels, Hazardous materials transportation Marine safety, Incorporation by reference.

##### *46 CFR Part 174*

Marine safety, Reporting and recordkeeping requirements, Vessels, Incorporation by reference.

##### *46 CFR Part 175*

Marine safety, Passenger vessels, Reporting and recordkeeping requirements.

##### *46 CFR Part 176*

Fire prevention, Marine safety, Passenger vessels, Reporting and recordkeeping requirements.

##### *46 CFR Part 178*

Marine safety, Passenger vessels.

##### *46 CFR Part 179*

Marine safety, Passenger vessels, Incorporation by reference.

46 CFR Part 185

Marine safety, Passenger vessels, Reporting and recordkeeping requirements.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 46 CFR parts 71, 114, 115, 122, 170, 171, 172, 174, 175, 176, 178, 179, and 185 as follows:

PART 71—INSPECTION AND CERTIFICATION

1. The authority citation for part 71 continues to read as follows:

Authority: 33 U.S.C. 1321(j); 46 U.S.C. 2113, 3205, 3306, 3307; E.O. 122234, 45 FR 58801, 3 CFR, 1980 Comp., p. 351; Department of Homeland Security Delegation No. 0170.1.

2. Redesignate § 71.25–50 as § 71.25–95, and add new § 71.25–50 to read as follows:

§ 71.25–50 Stability verification.

(a) At each annual inspection, the owner or operator of each vessel must demonstrate:

(1) That the stability information required under subpart D of part 170 of this title has been re-examined and confirmed to be appropriate for the loading and service intended; and,

(2) The means by which the master complies with the requirements of §§ 78.17–20 and 78.17–22 of this title.

(b) The owner or operator must verify, using current vessel measurements, that the vessel complies with the stability requirements of subchapter S of this chapter—

(1) Not more than ten years after the most recent verification required by this paragraph or issuance of stability information required by § 170.120 of this title; and,

(2) Following any modification or alteration that may affect the validity of the stability information required by § 170.120 of this title.

(c) For the purposes of paragraph (b) of this section—

(1) Calculations necessary for the verification must satisfy the requirements of § 170.090 of this title regardless of the contract date of the vessel;

(2) The vessel measurements must include a deadweight survey to verify the lightweight displacement and longitudinal center of gravity used to show compliance with the requirements of Subchapter S of this chapter; and,

(3) If the results of a deadweight survey show a deviation from the lightweight displacement exceeding 2 percent, or a deviation from the longitudinal center of gravity exceeding 1 percent of the length between

perpendiculars (LBP) as defined in § 170.055 of this title, then—

(i) A stability test must be conducted in compliance with the requirements of subpart F of part 170 of this title, except that the test may not be dispensed with on the basis of approved results of a sister vessel; and

(ii) The verification required by paragraph (b) of this section must use the newly determined lightweight displacement and centers of gravity.

(d) The Commanding Officer, Marine Safety Center or the cognizant OCMI, whichever issued the vessel’s stability information, may dispense with or authorize a change or deferral of the requirements of paragraph (b) of this section when the vessel’s stability can be adequately assessed by alternate means.

§ 71.50–1 [Amended]

3. In § 71.50–1, add at the end of the definition of “Drydock examination” the words “, including verification of the accuracy of draft marks”.

4. Revise the heading to subpart 71.75 to read as follows:

Subpart 71.75—Certificates Under the International Convention for Safety of Life at Sea, 1974

§ 71.75–1 [Amended]

5. In § 71.75–1(a), insert the words “or certificated for”, after the word “on”.

§ 71.75–5 [Amended]

6. In § 71.75–5—
a. In paragraph (a), add the words “or certificated for”, after the word “on” and, immediately before the word “Passenger”, add the word “SOLAS”.
b. In paragraph (b), add the words “or certificated for”, after the word “on” and, at the end of the paragraph, add “in addition to the applicable requirements of SOLAS.”

PART 114—GENERAL PROVISIONS

7. Revise the authority citation for part 114 to read as follows:

Authority: 46 U.S.C. 2103, 3306, 3703; Pub. L. 103–206, 107 Stat. 2439; 49 U.S.C. App. 1804; Department of Homeland Security Delegation No. 0170.1; § 114.900 also issued under 44 U.S.C. 3507.

8. Amend § 114.400(b) by—
a. Removing paragraph (3) from the definition of “Length”; and,
b. Adding a new definition for “Variable load” in alphabetical order to read as follows:

§ 114.400 Definition of terms used in this subchapter.

\* \* \* \* \*

Variable load means the weight of all items brought on board a vessel for

which explicit account is not made in approved stability calculations, including but not limited to, personal effects, carry-on items, luggage, wheelchairs, and sporting equipment.

\* \* \* \* \*

PART 115—INSPECTION AND CERTIFICATION

9. Revise the authority citation for part 115 to read as follows:

Authority: 33 U.S.C. 1321(j); 46 U.S.C. 2103, 3205, 3306, 3307; 49 U.S.C. App. 1804; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

10. In § 115.110, revise paragraphs (d)(2) and (d)(3), and add new paragraph (d)(4) to read as follows:

§ 115.110 Routes permitted.

\* \* \* \* \*

(d) \* \* \*

(2) The performance capabilities of the vessel based on design, scantlings, stability, subdivision, propulsion, speed, operating modes, maneuverability, and other characteristics;

(3) The suitability of the vessel for night-time operations; and,

(4) The suitability of the vessel for all environmental conditions.

11. Revise § 115.112 to read as follows:

§ 115.112 Total persons permitted.

The cognizant OCMI determines the total number of persons permitted to be carried on a vessel. In determining the total number of persons, the OCMI may consider: the total weight of passengers, crew, and variable loads; stability restrictions and subdivision requirements of the vessel; the vessel’s route, general arrangement, means of escape, and lifesaving equipment; minimum manning requirements; and the maximum number of passengers permitted in accordance with § 115.113.

12. Add § 115.505 to subpart E to read as follows:

§ 115.505 Stability verification.

(a) At each annual inspection or subsequent inspection for certification, the owner or operator of each new and existing vessel must demonstrate—

(1) That the stability information required under subpart D of part 170 of this title has been re-examined and confirmed to be appropriate for the loading and service intended; and

(2) The means by which the master complies with the requirements of § 122.315 of this title.

(b) The owner or operator of each new and existing vessel must verify, using

current vessel measurements and to the satisfaction of the OCMI, that the vessel complies with the stability requirements of subchapter S—

(1) Not more than ten years after the most recent verification required by this paragraph or issuance of stability information required by § 170.120 of this title; and,

(2) Following any modification or alteration that may affect the validity of the stability information required by § 170.120 of this title.

(c) For the purposes of paragraph (b) of this section—

(1) Calculations necessary for the verification must satisfy the requirements of § 170.090 of this title regardless of the contract date of the vessel;

(2) The vessel measurements must include a deadweight survey to verify the lightweight displacement and longitudinal center of gravity used to show compliance with the requirements of Subchapter S of this chapter; and

(3) If the results of a deadweight survey show a deviation from the lightweight displacement exceeding 2 percent, or a deviation from the longitudinal center of gravity exceeding 1 percent of LBP as defined in § 170.055 of this title, then—

(i) A stability test must be conducted in compliance with the requirements of subpart F of part 170 of this title, except that the test may not be dispensed with on the basis of approved results of a sister vessel; and

(ii) The verification required by paragraph (b) of this section must use the newly determined lightweight displacement and centers of gravity.

(d) The Commanding Officer, Marine Safety Center or the cognizant OCMI, whichever issued the vessel's stability information, may dispense with or authorize a change or deferral of the requirements of paragraph (b) of this section when the vessel's stability can be adequately assessed by alternate means.

13. In § 115.610, add two sentences to the end of paragraph (a) to read as follows:

**§ 115.610 Scope of drydock and internal structural examinations.**

(a) \* \* \* The accuracy of draft or loading marks, if required by § 122.602, must be verified. If the vessel's stability information includes any operating restrictions that refer to draft or loading marks, the draft or loading marks must be confirmed to correspond to that information.

\* \* \* \* \*

**§ 115.900 [Amended]**

14. Amend § 115.900(a) as follows:

a. Add the words "is certificated for or" after the word "which"; b. Remove the word "an" and, c. Remove the word "voyage" and add, in its place, the word "voyages".

**§ 115.910 [Amended]**

15. Amend § 115.910(a) as follows: a. Remove the word "issues" in the second sentence and, add, in its place, the words "authorizes the cognizant OCMI to issue"; and b. In the last sentence, after the word "will", add the words "authorize the cognizant OCMI to".

**§ 115.920 [Amended]**

16. In § 115.920(d), after the word "will" in the first sentence, and after the word "Commandant" in the second sentence, add the words "will authorize the cognizant OCMI to".

**§ 115.930 [Amended]**

17. In § 115.930, in the last sentence, remove the words "Commandant will indicate the" and, after the word "equivalent" add the words "must be indicated".

**PART 122—OPERATIONS**

18. The authority citation for part 122 continues to read as follows:

**Authority:** 46 U.S.C. 2103, 3306, 6101; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

19. In § 122.304, revise paragraph (a)(3) to read as follows:

**§ 122.304 Navigation underway.**

(a) \* \* \*

(3) Prevailing and forecasted visibility and environmental conditions, including wind and waves;

\* \* \* \* \*

20. In § 122.315, designate the existing paragraph as paragraph (a), and add paragraph (b) to read as follows:

**§ 122.315 Verification of vessel compliance with applicable stability requirements.**

(a) \* \* \*

(b) In order to fulfill the requirements of paragraph (a) of this section and avoid overloading the vessel, the master must take into account the total weight of passengers, crew, and variable loads.

**§ 122.602 [Amended]**

21. Amend § 122.602 as follows:

a. In paragraph (c), remove the words "that complies with the stability requirements of §§ 170.170, 170.173, 171.050, 171.055, and 171.057 of this chapter or with § 178.310 of this chapter"; b. Remove paragraph (b); and, c. Redesignate paragraphs (c) through (g) as paragraphs (b) through (f).

**PART 170—STABILITY REQUIREMENTS FOR ALL INSPECTED VESSELS**

22. The authority citation for part 170 continues to read as follows:

**Authority:** 43 U.S.C. 1333; 46 U.S.C. 2103, 3306, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

23. In § 170.001, revise paragraph(a) to read as follows:

**§ 170.001 Applicability.**

(a) This subchapter applies to each vessel that is—

(1) Contracted for on or after March 11, 1996, except where specifically stated otherwise; and,

(2) Is inspected under another subchapter of this chapter, or is a foreign vessel that must comply with the requirements in subchapter O of this chapter, or is required by either subchapter C or subchapter E of this chapter to meet applicable requirements contained in this subchapter.

\* \* \* \* \*

24. Revise § 170.015 to read as follows:

**§ 170.015 Incorporation by reference.**

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.htm](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.htm). It is also available for inspection at the Coast Guard, Office of Design Engineering Standards, Naval Architecture Division (CG-5212), 2100 Second Street SW., Washington, DC 20593-0001, and is available from the sources listed below.

(b) American Society for Testing and Materials (ASTM) 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(1) ASTM F 1196-00, Standard Specification for Sliding Watertight Door Assemblies, incorporation by reference approved for § 170.270.

(2) ASTM F 1197-00, Standard Specification for Sliding Watertight Door Control Systems, incorporation by reference approved for § 170.270.

(c) Military Specification, Naval Publications and Forms Center, Code 1052, 5801 Tabor Avenue, Philadelphia, PA 19120.

(1) MIL-P-21929B, Plastic Material, Cellular Polyurethane, Foam in Place, Rigid, 1970, incorporation by reference approved for § 170.245.

(2) [Reserved]

(d) International Maritime Organization (IMO), International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom.

(1) International Convention for the Safety of Life at Sea (SOLAS), 1974, and its Protocol of 1988: articles, annexes and certificates, as amended, chapter II-1 (SOLAS chapter II-1), incorporation by reference approved for §§ 170.140, 170.248.

(2) International Code on Intact Stability, 2008 (2008 IS Code), incorporation by reference approved for § 170.165.

25. Amend § 170.055, by redesignating paragraphs (m) through (w) as paragraphs (o) through (y), redesignating paragraphs (e) through (l) as paragraphs (f) through (m), and adding new paragraphs (e) and (n) to read as follows:

§ 170.055 Definitions concerning a vessel.

\* \* \* \* \*

(e) *Constructed* means the date—

(1) The vessel's keel was laid; or

(2) Construction identifiable with the vessel began and assembly of that vessel commenced comprising of 50 metric tons or at least one percent of the estimated mass of all structural material, whichever is less.

\* \* \* \* \*

(n) *Passenger fraction* ( $W/\Delta$ ) is the ratio of the weight of the maximum number of permitted passengers and their personal effects to the overall displacement of the vessel in a given loading condition.

\* \* \* \* \*

§ 170.070 [Amended]

26. In § 170.070(b) introductory text, add after the word "OCMI" the words " , or regulations by which the vessel is inspected require their application."

§ 170.075 [Amended]

27. In § 170.075(a), remove the words "or four copies for plan review being conducted by the American Bureau of Shipping (ABS)".

§ 170.080 [Amended]

28. In § 170.080, remove the words "or four copies for plan review being conducted by the ABS".

§ 170.085 [Amended]

29. In § 170.085, remove the words "or the ABS"

30. Revise § 170.090 by revising paragraph (a), and adding paragraphs (c), (d), (e) and (f) to read as follows:

§ 170.090 Calculations.

(a) All calculations required by this subchapter must be submitted with the plans required by § 170.075.

\* \* \* \* \*

(c) The assumed average weight per person for calculations showing compliance with the regulations of this subchapter must be representative of the passengers and crew aboard the vessel while engaged in the service intended. Unless the OCMI permits or requires the use of other values in writing, the average weight per person of passengers and crew should not be less than that computed by paragraph (e) of this section.

(d) The formula in paragraph (e) of this section will be used to determine the assumed average weight per person. It requires the use of the most recent mean weights of males and of females aged 20 years, as determined by Centers for Disease Control and Prevention (CDC). CDC releases this data periodically through the National Center for Health Statistics (NCHS) in a report that lists the most recent mean body weight data for the population of the United States. This report can be found on CDC's Web site. The Coast Guard will publish the availability of this report each time it is updated by the CDC, and the assumed average weight per person, as determined by the formula in paragraph(e) of this section, in a **Federal Register** Notice, without further rulemaking procedures. The assumed average weight per person will become effective 60 days from publication of the notice.

(e) The assumed average weight per person will be determined as follows: Add the mean weight of males aged 20 years and over to the mean weight of females aged 20 years and over, and divide the sum by 2. To this average mean weight, add 7.5 pounds of assumed clothing weight. The resulting sum, rounded to the nearest whole number in pounds, is the assumed average weight per person.

(f) Calculations must account for the weight of all loads carried aboard the vessel.

§ 170.093 [Amended]

31. In § 170.093, remove the last sentence.

§ 170.100 [Amended]

32. Amend § 170.100 by removing paragraphs (c) and (d).

33. Add § 170.105(b)(5) to read as follows:

§ 170.105 Applicability.

\* \* \* \* \*

(b) \* \* \*

(5) A small passenger vessel inspected under subchapter T of this chapter if § 178.210(c) of this title is applicable.

§ 170.110 [Amended]

34. In § 170.110(b), remove the words "or the ABS".

§ 170.120 [Amended]

35. In § 170.120(a), remove the words "or the ABS".

§ 170.135 [Removed]

36. Remove § 170.135.

37. Add § 170.140 to subpart D to read as follows:

§ 170.140 Operating information for a vessel constructed on or after 1 January 2009 and issued a SOLAS safety certificate.

(a) This section applies to each vessel that is—

(1) Constructed on or after January 1, 2009; and,

(2) Issued either a SOLAS Passenger Ship Safety Certificate or a SOLAS Cargo Ship Safety Construction Certificate.

(b) In addition to the information required in § 170.110 of this part, the stability booklet of each vessel to which this section applies must contain the information required by applicable regulations of SOLAS chapter II-1 (incorporated by reference, see § 170.015).

(c) As used in SOLAS chapter II-1, *Administration* means the Commandant, U.S. Coast Guard.

38. Revise the heading of Subpart E to read as follows:

Subpart E—Intact Stability Criteria

39. In § 170.160 revise paragraphs (a) and (c)(3) and add paragraph (d) to read as follows:

§ 170.160 Specific applicability.

(a) Except as provided in paragraphs (b) through (d) of this section, this subpart applies to each vessel.

\* \* \* \* \*

(c) \* \* \*

(3) A vessel that performs one of the simplified stability proof tests described in subpart C of part 178 of this title.

(d) A vessel that complies with § 170.165 of this title need not comply with §§ 170.170 and 170.173 of this title.

40. Add § 170.165 to read as follows:

**§ 170.165 International Code on Intact Stability.**

(a) Each vessel issued one or more of the certificates listed in paragraphs (a)(1) through (4) of this section, must comply with the Introduction and Part A of the International Code on Intact Stability, 2008 (2008 IS Code):

- (1) International Load Line Certificate.
- (2) SOLAS Passenger Ship Safety Certificate.
- (3) SOLAS Cargo Ship Safety Construction Certificate.
- (4) High-Speed Craft Safety Certificate.

(b) A vessel not subject to the requirements of paragraph (a) of this section is permitted to comply with the applicable criteria contained in the 2008 IS Code as an alternative to the requirements of §§ 170.170 and 170.173 of this title.

41. In § 170.170, revise the section heading and paragraphs (a) and (b), and the second sentence of paragraph (d), and add paragraph (e) to read as follows:

**§ 170.170 Weather criteria.**

(a)(1) Except as provided in paragraph (b) of this section, each vessel must be shown by design calculations in each condition of loading and operation to have a calculated angle of heel not greater than:

- (i) For a sailing vessel, 14 degrees or the angle of heel at which the deck edge is immersed, whichever is less; or,
- (ii) For a non-sailing vessel, 14 degrees or the angle of heel at which one-half the freeboard to the deck edge is immersed, whichever is less.

(2) The calculated angle of heel is defined as the angle at which the righting arm curve intersects the wind heeling arm curve given by the following equation:

$$\text{Heeling arm} = P \times A \times H \times \cos(T) / \Delta$$

Where—

$P = 0.005 + (L/14,200)^2$  tons/ft<sup>2</sup> \* \* \* for ocean service, Great Lakes winter service, or service on exposed waters.

$P = 0.055 + (L/1309)^2$  metric tons/m<sup>2</sup> \* \* \* for ocean service, Great Lakes winter service, or service on exposed waters.

$P = 0.0033 + (L/14,200)^2$  tons/ft<sup>2</sup> \* \* \* for Great Lakes summer service or service on partially protected waters.

$P = 0.036 + (L/1309)^2$  metric tons/m<sup>2</sup> \* \* \* for Great Lakes summer service or service on partially protected waters.

$P = 0.0025 + (L/14,200)^2$  tons/ft<sup>2</sup> \* \* \* for service on protected waters.

$P = 0.028 + (L/1309)^2$  metric tons/m<sup>2</sup> \* \* \* for service on protected waters.

L = LBP in feet (meters).

A = Area in square feet (square meters) of the projected lateral surface of the portion of the vessel above the waterline (including the hull, superstructure, cargo, masts,

area bounded by railings, canopies, or similar obstructions but not protruding objects such as antennas or running rigging).

H = the vertical distance in feet (meters) from the center of A to the center of the underwater lateral area or approximately to the one-half draft point.

T = angle of heel.

Δ = Displacement in long tons (metric tons).

(b) If approved by the Coast Guard Marine Safety Center, a larger value of T may be used for a vessel with a discontinuous weather deck or abnormal sheer.

\* \* \* \* \*

(d) \* \* \* On other types of vessels, the Coast Guard Marine Safety Center requires calculations in addition to those in paragraph (a) of this section.

\* \* \*

(e) For the purposes of this subpart, a vessel's righting arm must be calculated considering the vessel is permitted to trim free until the trimming moment is zero.

**§ 170.173 [Amended]**

42. In § 170.173(a) introductory text, remove the words "or the ABS".

**§ 170.175 [Amended]**

43. Amend § 170.175 as follows:

a. In paragraph (b) remove the words "or ABS"; and,

b. In paragraphs (c) and (d) remove the words "or the ABS".

**§ 170.180 [Amended]**

44. In § 170.180 introductory text, remove the words "or ABS" in both places where it appears.

**§ 170.185 [Amended]**

45. In § 170.185(b), remove the words "or the ABS".

**§ 170.190 [Amended]**

46. In § 170.190, remove the words "or ABS".

**§ 170.235 [Amended]**

47. In § 170.235(b), remove the words "or the ABS".

48. In § 170.248, revise paragraph (a) and add paragraph (d) to read as follows:

**§ 170.248 Applicability.**

(a) Except as provided in paragraphs (b) through (d) of this section, this subpart applies to vessels with watertight doors in bulkheads that have been made watertight to comply with the flooding or damage stability regulations in this subchapter.

\* \* \* \* \*

(d) Each vessel issued a SOLAS Passenger Ship Safety Certificate or a SOLAS Cargo Ship Safety Construction

Certificate must comply with the applicable regulations of SOLAS chapter II-1 in addition to the requirements of this subpart (SOLAS chapter II-1, incorporated by reference, see § 170.015).

**§ 170.270 [Amended]**

49. In § 170.270—

a. Remove the term "ASTM F 1196" wherever it appears and, in its place, add the term "ASTM F 1196-00", and remove the term "ASTM F 1197" wherever it appears and, in its place, add the term "ASTM F 1197-00"; and

b. In paragraph (a)(3), remove the words "(incorporated by reference, see § 170.015)" wherever they appear.

**PART 171—SPECIAL RULES PERTAINING TO VESSELS CARRYING PASSENGERS**

50. The authority citation for part 171 continues to read as follows:

**Authority:** 46 U.S.C. 2103, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

51. In § 171.001, revise paragraph (a), and add paragraphs (c) and (d) to read as follows:

**§ 171.001 Applicability.**

(a) Except as provided in paragraph (d) of this section, this part applies to passenger vessels inspected under subchapter K or H of this chapter, or a passenger vessel the stability of which is questioned by the OCMI.

\* \* \* \* \*

(c) Specific sections of this part may also apply to a small passenger vessel inspected under subchapter T of this chapter. The specific sections are listed in subparts B and C of part 178 of this title and in subpart B of part 179 of this title.

(d) A passenger vessel constructed on or after 1 January 2009 and issued a SOLAS Passenger Ship Safety Certificate must meet the applicable requirements of SOLAS chapter II-1 (incorporated by reference, see § 171.012), instead of the requirements of this part. For the purposes of this section, the applicable requirements of SOLAS chapter II-1, are equivalent to the requirements of this part when applied to such vessels.

52. Add new § 171.012 to read as follows:

**§ 171.012 Incorporation by reference.**

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition

other than that specified in this section, the Coast Guard must publish a notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.htm](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.htm). It is also available for inspection at the Coast Guard, Office of Design Engineering Standards, Naval Architecture Division (CG-5212), 2100 Second Street SW., Washington, DC 20593-0001, and is available from the sources listed below.

(b) International Maritime Organization (IMO) International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom.

(1) International Convention for the Safety of Life at Sea, 1974, and its Protocol of 1988: articles, annexes and certificates, as amended, chapter II-1 (SOLAS chapter II-1), incorporation by reference approved for §§ 171.001, 171.080.

(2) International Code on Intact Stability, 2008 (2008 IS Code), incorporation by reference approved for § 171.050.

53. Add the heading of subpart B to read as follows:

#### **Subpart B—Intact Stability**

#### **Subpart C—Heading [Removed]**

54. Remove the heading for subpart C and transfer §§ 171.045, 171.050, 171.055, and 171.057 to subpart B.

55. Revise § 171.045 to read as follows:

#### **§ 171.045 Weight of passengers and crew.**

(a) This section applies to each vessel, regardless of when constructed.

(b) Compliance with the intact stability requirements applicable to each vessel, using a total weight of passengers and crew carried, is based upon an assumed average weight per person determined in accordance with paragraph (c) of § 170.090 of this title.

56. Revise § 171.050 to read as follows:

#### **§ 171.050 Passenger heel requirements for a mechanically propelled or a nonself-propelled vessel.**

(a) Except as provided in paragraph (c) of this section, each vessel must be shown by design calculations in each condition of loading and operation to have a calculated angle of heel not greater than 14 degrees or the angle of

heel at which the deck edge is first submerged, whichever is less. In any condition of loading, the calculated angle of heel is defined as the angle at which the righting arm curve intersects the heeling arm curve given by the following equation:

$$\text{Heeling arm} = (W/\Delta)(2/3)(b)(\cos(T))$$

Where:

$W/\Delta$  = passenger fraction

$W$  = total weight in long (metric) tons of persons other than required crew, including personal effects expected to be carried on the vessel

$\Delta$  = displacement of the vessel in long (metric) tons

$b$  = distance in feet (meters) from the centerline of the vessel to the geometric center of the passenger deck to one side of the centerline

$T$  = angle of heel

(b) For the purpose of this section, a vessel's righting arm must be calculated considering the vessel is permitted to trim free until the trimming moment is zero.

(c) A vessel that complies with the requirements for passenger ships contained in the International Code on Intact Stability, 2008 (2008 IS Code) (incorporated by reference; see § 171.012) need not comply with paragraph (a) of this section. Vessels complying with the 2008 IS Code must use the assumed average weight per person given according to § 170.090 to be exempt from paragraph (a) of this section.

57. Add new § 171.052 to read as follows:

#### **§ 171.052 Passenger distribution requirements for vessels of unusual proportion and form.**

(a) Vessels to which § 170.173 of this title applies must also comply with the requirements of paragraph (b) of this section.

(b) For a vessel with a passenger fraction greater than 15 percent, and with passengers distributed in the accommodation area to produce the most unfavorable combination of passenger heeling moment and/or initial metacentric height, the area under each righting arm curve from the angle of equilibrium to an angle of 40 degrees, the downflooding angle, or the angle of the maximum righting arm, whichever is less, must not be less than:

(1) For exposed and partially protected routes—

(i) 10 foot-degrees with 5 square feet per person (2.15 persons per square meter) assumed in the areas accessible to passengers; and

(ii) 7 foot-degrees with 2 square feet per person (5.38 persons per square

meter) assumed in the areas accessible to passengers; and

(2) For protected routes—

(i) 5 foot-degrees with 5 square feet per person (2.15 persons per square meter) assumed in the areas accessible to passengers; and

(ii) 2 foot-degrees with 2 square feet per person (5.38 persons per square meter) assumed in the areas accessible to passengers.

58. Add a heading for subpart C, above § 171.060, to read as follows:

#### **Subpart C—Subdivision and Damage Stability**

##### **§ 171.060 [Amended]**

59. In § 171.060(a), remove the words “or § 171.075 for Type III subdivision”.

##### **§ 171.065 [Amended]**

60. In § 171.065(b)(2), remove the second equation, “ $Y = (M + 2P) / (V + P1 - P)$ ” and add, in its place, the equation “ $Y = (M + 2P1) / (V + P1 - P)$ ”.

##### **§ 171.070 [Amended]**

61. In § 171.070(e)(1) introductory text, add the words “or the vessel makes international voyages,” after the words “If the LBP of the vessel is 143 feet (43.5 meters) or more,”.

##### **§ 171.075 [Removed]**

62. Remove § 171.075.

##### **§ 171.080 [Amended]**

63. Amend § 171.080 as follows:

a. In § 171.080 (f)(4)(i), remove “ $w$  = passenger weight = 75 kilograms,” and add, in its place, “ $w$  = passenger weight used for calculations complying with § 170.090 of this title”;

b. In § 171.080(f)(4)(ii)(A), remove the words “Each passenger weighs 75 kilograms” and add, in their place, the words “The weight of each passenger is taken at the weight used for calculations complying with § 170.090 of this title”; and,

c. In the heading to paragraph (g), after the word “vessels” add the words “constructed before January 1 2009”, and, in paragraph (g) text, after the words “regulation 8” add the words “in force on December 31, 2008 (incorporated by reference; see § 171.012)”.

##### **§ 171.082 [Removed]**

64. Remove § 171.082.

#### **PART 172—SPECIAL RULES PERTAINING TO BULK CARGOES**

65. The authority citation for part 172 continues to read as follows:

**Authority:** 46 U.S.C. 3306, 3703, 5115; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p.

277; Department of Homeland Security Delegation No. 0170.1.

66. Revise § 172.020 to read as follows:

**§ 172.020 Incorporation by reference.**

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.htm](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.htm). It is also available for inspection at the Coast Guard, Office of Design Engineering Standards, Naval Architecture Division (CG-5212), 2100 Second Street, SW., Washington, DC 20593-0001, and is available from the sources listed below.

(b) International Maritime Organization (IMO), International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom.

(1) Amendment to Chapter VI of the International Convention for the Safety of Life at Sea, 1960, Resolution A.264(VIII), incorporation by reference approved for § 172.015.

(2) Publication No. 240-E, International Code for the Safe Carriage of Grain in Bulk, incorporation by reference approved for § 172.015.

(3) Regulation 27, annex I of MARPOL 73/78, incorporation by reference approved for § 172.070.

67. Revise § 172.070 to read as follows:

**§ 172.070 Intact Stability.**

All tank vessels of 5,000 DWT and above, contracted after December 3, 2001, must comply with the intact stability requirements of Regulation 27, annex I of MARPOL 73/78 (incorporated by reference; see § 172.020).

**PART 174—SPECIAL RULES PERTAINING TO SPECIAL VESSEL TYPES**

68. The authority citation for part 174 continues to read as follows:

**Authority:** 42 U.S.C. 9118, 9119, 9153; 43 U.S.C. 1333; 46 U.S.C. 3306, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

69. Revise § 174.007 to read as follows:

**§ 174.007 Incorporation by reference.**

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.htm](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.htm). It is also available for inspection at the Coast Guard, Office of Design Engineering Standards, Naval Architecture Division (CG-5212), 2100 Second Street SW., Washington, DC 20593-0001, and is available from the sources listed below.

(b) American Society for Testing and Materials (ASTM) 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(1) ASTM F 1196-00, Standard Specification for Sliding Watertight Door Assemblies, incorporation by reference approved for § 174.100.

(2) ASTM F 1197-00, Standard Specification for Sliding Watertight Door Control Systems, incorporation by reference approved for § 174.100.

(c) International Maritime Organization (IMO), International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom.

(1) International Convention for the Safety of Life at Sea (SOLAS), 1974, and its Protocol of 1988: articles, annexes and certificates, as amended, chapter II-1 (SOLAS chapter II-1), incorporation by reference approved for § 174.360.

(2) [Reserved]

**§ 174.100 [Amended]**

70. In § 174.100—  
 a. Remove the term “ASTM F 1196” wherever it appears and, in its place, add the term “ASTM F 1196-00”, and remove the term “ASTM F 1197” wherever it appears and, in its place, add the term “ASTM F 1197-00”; and  
 b. In paragraph (e)(3), remove the words “(incorporated by reference, see § 174.007)” wherever they appear.

71. Revise § 174.360 to read as follows:

**§ 174.360 Calculations.**

Each ship to which this subpart applies must comply with the minimum

standard of subdivision and damage stability applicable to that ship under SOLAS chapter II-1, (incorporated by reference; see § 174.007) part B-1. Compliance with the applicable requirements must be demonstrated by calculations and reflected in information on loading restrictions, such as a maximum height of the center of gravity (KG) or minimum metacentric height (GM) curve, that is part of the stability information required by § 170.110 of this chapter.

**PART 175—GENERAL PROVISIONS**

72. Revise the authority citation for part 175 to read as follows:

**Authority:** 46 U.S.C. 2103, 3205, 3306, 3703; Pub. L. 103-206, 107 Stat. 2439; 49 U.S.C. App. 1804; Department of Homeland Security Delegation No. 0170.1; § 175.900 also issued under 44 U.S.C. 3507.

73. In § 175.400, add new definitions for “Total test weight” and “Variable load” in alphabetical order to read as follows:

**§ 175.400 Definition of terms used in this subchapter.**

\* \* \* \* \*

*Total test weight* means the weight used to simulate heeling and trimming moments when a simplified stability test is performed in accordance with § 178.330 or § 178.340 of this title.

\* \* \* \* \*

*Variable load* means the weight of all items brought on board a vessel for which explicit account is not made in approved stability calculations, including but not limited to, personal effects, carry-on items, luggage, wheelchairs, and sporting equipment.

\* \* \* \* \*

**PART 176—INSPECTION AND CERTIFICATION**

74. Revise the authority citation for part 176 to read as follows:

**Authority:** 33 U.S.C. 1321(j); 46 U.S.C. 2103, 3205, 3306, 3307; 49 U.S.C. App. 1804; E.O. 11735, 38 FR 21243, 3 CFR, 1971-1975 Comp., p. 743; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

75. In § 176.110, revise paragraphs (d)(2) and (d)(3), and add paragraph (d)(4) to read as follows:

**§ 176.110 Routes permitted.**

\* \* \* \* \*

(d) \* \* \*

(2) The performance capabilities of the vessel based on design, scantlings, stability, subdivision, propulsion, speed, operating modes,

maneuverability, and other characteristics;

(3) The suitability of the vessel for nighttime operations; and

(4) The suitability of the vessel for all environmental conditions.

76. Revise § 176.112 to read as follows:

**§ 176.112 Total persons permitted.**

The cognizant OCMI determines the total number of persons permitted to be carried on a vessel. In determining the total number of persons, the OCMI may consider: The total weight of passengers, crew, and variable loads; stability restrictions and subdivision requirements of the vessel; the vessel's route, general arrangement, means of escape, and lifesaving equipment; minimum manning requirements; and the maximum number of passengers permitted in accordance with § 176.113 of this title.

77. Add § 176.505 to subpart E to read as follows:

**§ 176.505 Stability verification.**

(a) At each annual inspection and subsequent inspection for certification, the owner or operator of each new and existing vessel must demonstrate—

(1) That the stability information required under subpart B of part 178 of this title has been re-examined and confirmed to be appropriate for the loading and service intended; and

(2) The means by which the master complies with the requirements of § 185.315 of this title must be demonstrated.

(b) The owner or operator of each new or existing vessel must verify, using current vessel measurements, and to the satisfaction of the OCMI, that the vessel complies with the stability requirements of this subchapter—

(1) Not more than ten years after the date of the most recent verification required by this paragraph or issuance of stability information required by § 178.210 of this title; and,

(2) Following any modification or alteration that may affect the validity of the stability information required by § 178.210.

(c) For the purposes of paragraph (b) of this section—

(1) If § 178.320 (e), (f), (g), or (h) of this title is applicable, the verification must include—

(i) Measurements with the vessel in a condition that is the same as that used in or documented when the most recent simplified stability proof test specified in paragraph (a) of either §§ 178.330 or 178.340 was performed;

(A) If § 178.330 of this title is applicable, freeboard measurements; or

(B) If § 178.340 of this title is applicable, measurements of cross-sectional area;

(ii) An assessment of the total test weight regardless of the contract date of the vessel according to § 178.330(a)(4) of this title; and

(iii) A validation that the vessel arrangement is substantially unchanged from the date when the most recent stability verification or simplified stability proof test was performed;

(2) If § 178.310(a) or § 178.320(c) of this title is applicable—

(i) Calculations necessary for the verification must satisfy the requirements of § 170.090 of this title regardless of the contract date of the vessel;

(ii) The vessel measurements must include a deadweight survey to verify the lightweight displacement and longitudinal center of gravity used to show compliance with the requirements of Subchapter S of this chapter; and,

(iii) If the results of a deadweight survey show a deviation from the lightweight displacement exceeding 2 percent, or a deviation of the longitudinal center of gravity exceeding 1 percent of LBP as defined in § 170.055 of this title, then—

(A) A stability test must be conducted in compliance with the requirements of subpart F of part 170 of this title, except that the test may not be dispensed with on the basis of approved results of a sister vessel; and

(B) The verification required by paragraph (b) of this section must use the newly determined lightweight displacement and centers of gravity.

(3) If § 178.310 (c) or § 178.320 (d) of this title applies, the scope of the verification will be determined by the Commanding Officer, Marine Safety Center.

(d) The Commanding Officer, Marine Safety Center or the cognizant OCMI, whichever issued the vessel's stability information, may dispense with or authorize a change or deferral of the requirements of paragraph (b) of this section when the vessel's stability can be adequately assessed by alternate means.

**§ 176.610 [Amended]**

78. In § 176.610, add two sentences to the end of paragraph (a) to read as follows:

**§ 176.610 Scope of drydock and internal structural examinations.**

(a) \* \* \* The accuracy of draft or loading marks, if required by § 122.602, must be verified. If stability information includes any operating restrictions that refer to draft or loading marks, the draft

or loading marks must be confirmed to correspond to that information.

\* \* \* \* \*

**§ 176.900 [Amended]**

79. Amend § 176.900(a) as follows:

a. Add the words "is certificated for or" after the word "which";

b. Remove the word "an," and,

c. Remove the word "voyage" and add, in its place, the word "voyages".

**§ 176.910 [Amended]**

80. Amend § 176.910(a) as follows:

a. Remove the word "issues" in the second sentence and, add, in its place, the words "authorizes the cognizant OCMI to issue"; and

b. In the last sentence, after the word "will", add the words "authorize the cognizant OCMI to".

**§ 176.920 [Amended]**

81. In § 176.920(d), after the word "will" in the first sentence, and after the word "Commandant" in the second sentence, add the words "will authorize the cognizant OCMI to".

**§ 176.930 [Amended]**

82. In § 176.930, in the last sentence remove the words "Commandant will indicate the" and, after the word "equivalent", add the words "must be indicated".

**PART 178—INTACT STABILITY AND SEAWORTHINESS**

83. The authority citation for part 178 continues to read as follows:

**Authority:** 43 U.S.C. 1333; 46 U.S.C. 2103, 3306, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

**§ 178.115 [Amended]**

84. In § 178.115, at the beginning of the paragraph add the words "Except where specifically stated otherwise,".

85. In § 178.210, revise the first sentence of paragraphs (a) and (b), revise paragraph (c), and add paragraph (d) to read as follows:

**§ 178.210 Stability information.**

(a) Stability information (stability details indicated on the Certificate of Inspection, a stability letter, or a stability booklet) is required on certain vessels by paragraphs (b), (c), or (d) of this section. \* \* \*

(b) A vessel which, under § 178.310 of this title, complies with requirements in subchapter S of this chapter, must have stability details on the vessel's Certificate of Inspection, a stability letter issued by the cognizant Officer in Charge, Marine Inspection (OCMI) or the Commanding Officer, Marine Safety

Center, or an approved stability booklet.  
\* \* \*

(c) When necessary for safe operation, the cognizant OCMI may place specific stability restrictions in a stability letter or on the Certificate of Inspection of a vessel not more than 65 feet (19.8 meters) in length, which, under § 178.310 of this title, complies with the requirements of § 178.320 of this title.

(d) A vessel that complies with § 178.320(b), and undergoes a stability test in accordance with § 178.340, must have a stability letter issued by the Commanding Officer, Marine Safety Center.

86. Add new § 178.215 to read as follows:

**§ 178.215 Weight of passengers and crew.**

(a) This section applies to each vessel, regardless of when constructed, for which stability information is based on the results of a simplified stability proof test.

(b) Except as provided in paragraph (c) of this section, and if not provided in the stability information required, the owner of each vessel must provide the master with the total test weight used in the simplified stability proof test and the number of passengers and crew included in the total test weight. Owners and masters must use a total weight of passengers and crew carried that is based upon an assumed average weight per person determined in accordance with paragraph (c) of § 178.330(a)(4) of this title.

(c) The information specified in paragraph (b) of this section need not be provided if the owner attests that the vessel complies with applicable intact stability requirements when carrying the number of passengers and crew permitted by the Certificate of Inspection with an assumed average weight per person in accordance with § 178.330(a)(4) of this title.

87. In § 178.230, revise paragraphs (b) introductory text and (b)(1), and add paragraph (c) to read as follows:

**§ 178.230 Stability letter or Certificate of Inspection stability details.**

\* \* \* \* \*

(b) If § 178.210(c) applies, the following information, and the necessary calculations used to determine that information, must be submitted in accordance with paragraph (a) of this section:

(1) Allowable weight and number of passengers and crew on each deck;

\* \* \* \* \*

(c) If § 178.210(b) applies, the applicable information described in subpart C of part 170 of this title, and the calculations used to determine that information, must be submitted in addition to the applicable information listed in paragraph (b) of this section.

88. Revise § 178.310 to read as follows:

**§ 178.310 Applicability based on vessel characteristics and passenger capacity.**

(a) Each vessel that is greater than 65 feet (19.8 meters) in length, carries more

than 12 passengers on an international voyage, or has more than one deck above the bulkhead deck excluding the pilot house must meet applicable intact stability requirements in each condition of loading and operation. These requirements are contained in:

(1) Part 170 of this chapter, except subparts G and H; and,

(2) Part 171 of this chapter, subparts A and B.

(b) Each vessel must meet the requirements of § 178.320 of this title if the vessel:

(1) Is 65 feet (19.8 meters) in length or less;

(2) Carries not more than 12 passengers on an international voyage; and

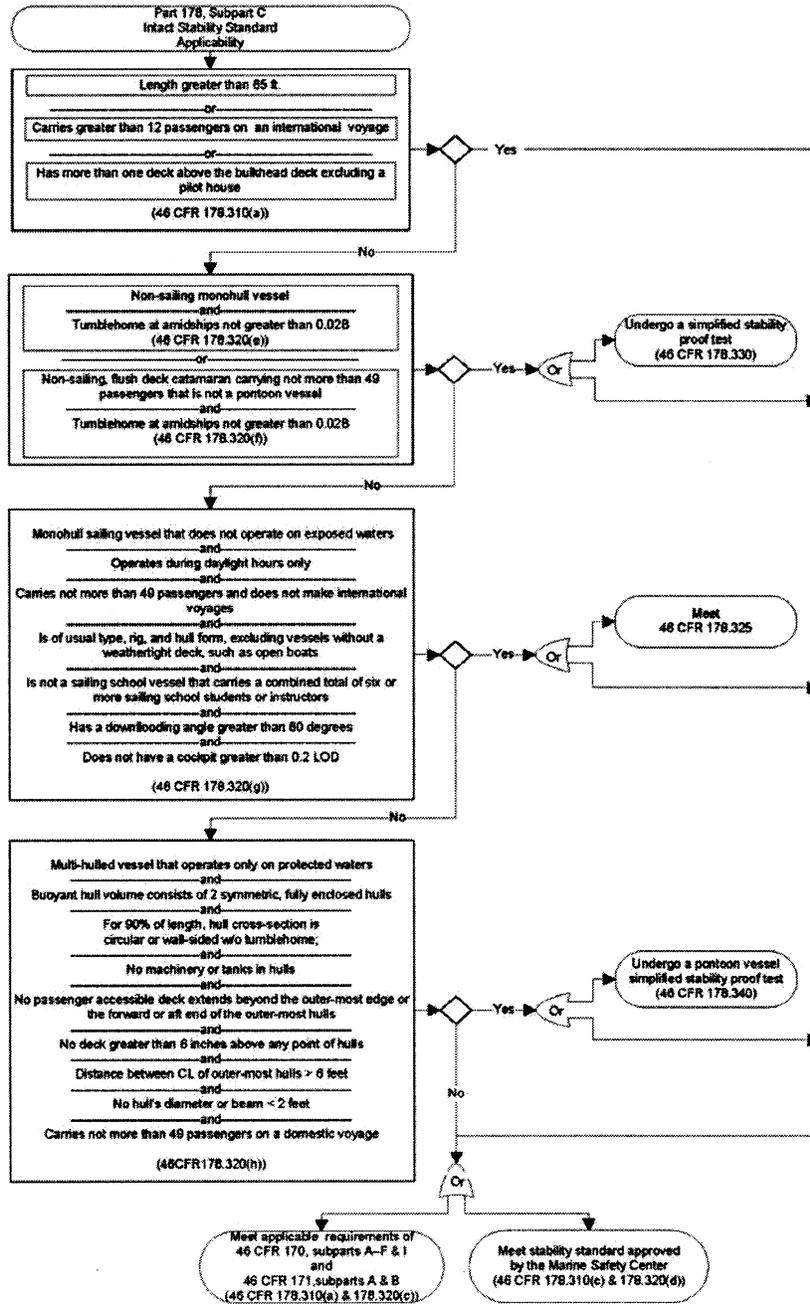
(3) Does not have more than one deck above the bulkhead deck or, for a vessel without a bulkhead deck, does not have more than one deck above the deck from which freeboard is measured excluding a pilot house.

(c) In lieu of the requirements in paragraph (a) of this section, a vessel may meet another stability standard approved by the Commanding Officer, Marine Safety Center.

(d) The requirements of this section and §§ 178.320 and 178.325 are graphically represented in Figure 178.310.

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Figure 178.310



89. Revise § 178.320 to read as follows:

**§ 178.320 Intact stability requirements.**

(a) A simplified stability proof test in accordance with § 178.330 or § 178.340, as appropriate, is conducted to determine if a vessel, as built and operated, has a minimum level of initial stability. Failing the simplified test does not necessarily mean that the vessel lacks stability for the intended route, service, and operating condition, but that calculations or other methods must be used to evaluate the stability of the vessel.

(b) Except as provided by paragraph (i) of this section, each vessel must comply with paragraph (c), (d), (e), (f), (g), or (h) of this section. The cognizant OCMI may require the vessel to meet the requirements of paragraph (c) of this section.

(c) A vessel, in each condition of loading and operation, may meet the applicable intact stability requirements of—

(1) Part 170 of this chapter, except subparts G and H; and,

(2) Part 171 of this chapter, subparts A and B.

(d) In lieu of the requirements in paragraph (a) of this section, a vessel may meet another stability standard approved by the Commanding Officer, Marine Safety Center.

(e) A non-sailing monohull vessel may undergo a simplified stability proof test in accordance with § 178.330 of this title in the presence of a Coast Guard marine inspector if the vessel does not have tumblehome at the deck, measured amidships, that exceeds two percent of the beam.

(f) A non-sailing, flush deck catamaran carrying not more than 49 passengers may undergo a simplified stability proof test in the presence of a

Coast Guard marine inspector, in accordance with § 178.330 of this title, if the vessel does not have tumblehome at the deck, measured amidships, that exceeds two percent of the beam, and the vessel is not a pontoon vessel.

(g) A self-propelled multihull vessel may undergo a pontoon simplified stability proof test in the presence of a Coast Guard marine inspector, in accordance with § 178.340 of this title, if the vessel satisfies the requirements listed in paragraphs (g)(1) through (9) of this section:

(1) The vessel carries not more than 49 passengers and does not make international voyages;

(2) The vessel is constructed with only one deck;

(3) The buoyant hull volume consists of two symmetric, fully enclosed hulls;

(4) The cross section of each hull is circular or of wall-sided construction without tumblehome, and constant for at least 90 percent of the length of the hull;

(5) The hulls contain no machinery or tanks;

(6) The portion of the deck accessible to passengers does not extend beyond—

(i) The outboard edge of the hulls, and,

(ii) The forward or the aft end of the hulls;

(7) There is no deck more than 6 inches (0.15 meters) above any point on any of the buoyant hulls;

(8) The distance between the centerlines of the hulls is not less than 6 feet (1.83 meters); and,

(9) Each hull has a beam or diameter, as applicable, of not less than 2 feet (0.61 meters).

(h) A monohull sailing vessel may meet the requirements of § 178.325 of this title if it satisfies the following seven requirements:

(1) The vessel does not operate on exposed waters;

(2) The vessel only operates during the daylight hours;

(3) The vessel is of the usual type, rig, and hull form, excluding vessels without a weathertight deck, such as open boats;

(4) The vessel carries not more than 49 passengers and does not make international voyages;

(5) The vessel is not a sailing school vessel that carries a combined total of six or more sailing school students or instructors;

(6) The minimum downflooding angle is greater than 60 degrees; and,

(7) The vessel does not have a cockpit greater than 20 percent of the Length Over Deck.

(i) For a vessel that carries not more than 49 passengers and carries no deck cargo, the cognizant OCMI may:

(1) Dispense with the requirements of the simplified stability proof test in § 178.330, when the vessel's stability can be adequately assessed by alternate means, which include, but are not limited to, the form, arrangement, construction, number of decks, route, and operating restrictions of the vessel;

(2) Authorize a change in the requirements of the simplified stability proof test in § 178.330, when necessary to adequately assess the vessel's stability; or

(3) In lieu of conducting a simplified stability proof test, perform operational tests to determine whether the vessel has adequate stability and satisfactory handling characteristics for protected waters and/or partially protected waters.

(j) The requirements of this section and §§ 178.310 and 178.325 are graphically represented in Table 178.320.

TABLE 178.320—APPLICABLE INTACT STABILITY CRITERIA

This table summarizes the criteria applicable to a vessel described in § 178.310 (b). These criteria are:

1. Vessel length less than or equal to 65 feet;
2. Not more than 12 passengers carried on an international voyage;
3. Not more than 150 passengers carried on a domestic voyage; and
4. Vessel does not have more than one deck above the bulkhead deck, excluding a pilot house.

A vessel for which a simplified stability proof test is not appropriate must meet criteria contained in 46 CFR Subchapter S or a standard approved by the MSC, unless § 178.320 (i) is applicable.

Propulsion type .....	Non-sailing				Sailing	
	1		2		1	2
Number of hulls .....						
Number of Passengers .....	>49	<=49	>49	<=49	<=49	
Applicable Proof Test:						
§ 178.330 .....	X	X		Note 1 Note 1	X	
§ 178.340 (PSST) .....						
MSC approved standard:						
§ 178.310 (c) .....	X	X Note 2	X	X Note 2	X Note 2	X
OCMI determined standard or dispenses with proof test .....						
46 CFR Subchapter S criteria:						

TABLE 178.320—APPLICABLE INTACT STABILITY CRITERIA—Continued

Part 170, subpart C “Plan Approval” .....	X	X	X	X	X	X
Part 170, subpart E “Intact Stability”:						
§ 170.170 “Weather criteria” .....	X	X	X	X	X	X
§ 170.173 “Criterion for vessels of unusual proportion and form” ...	X	X	X	X	X	X
Part 170, subpart F “Determination of Lightweight Displacement and Centers of Gravity” .....	X	X	X	X	X	X
Part 171, subpart B “Intact Stability”:						
§ 171.050 (passenger heel) .....	X	X	X	X		
§ 171.052 (passenger distribution) .....	X	X	X	X	X	X
§ 171.055 (monohull sailing) .....					X	
§ 171.057 (sailing catamaran) .....					X	X

**Note 1:** See § 178.320 (f) and § 178.320 (g).  
**Note 2:** See § 178.320 (i).

90. Revise § 178.325 to read as follows:

**§ 178.325 Intact stability requirements for a monohull sailing vessel.**

(a) A monohull sailing vessel may undergo a simplified stability proof test in accordance with § 178.330 of this title in the presence of a Coast Guard marine inspector.

(b) A sailing vessel that operates on partially protected waters must be equipped with a self-bailing cockpit.

(c) The Commanding Officer, Marine Safety Center may prescribe additional or different stability requirements for a broad, shallow draft vessel with little or no ballast outside the hull.

91. In § 178.330, revise paragraphs (a), (b), and (d)(6), and add paragraph (d)(7), to read as follows:

**§ 178.330 Simplified stability proof test (SST).**

(a) A vessel must be in the condition specified in this paragraph when a simplified stability proof test is performed.

(1) The construction of the vessel is complete in all respects.

(2) Ballast, if necessary, is in compliance with § 178.510 and is on board and in place.

(3) Each fuel and water tank is approximately three-quarters full.

(4) A weight equal to the total weight of all passengers, crew, and variable loads permitted on the vessel is on board and distributed so as to provide normal operating trim and to simulate the vertical center of gravity, causing the least stable condition that is likely to occur in service. The assumed average weight per person of passengers and crew must be representative of the passengers and crew on board the vessel while engaged in the service intended. Unless the cognizant OCMI permits or requires the use of other values in writing, weight and vertical center of gravity are to be assumed as follows:

(i) The weight of primary lifesaving equipment should be simulated at its

normal location, if not on board at the time of the test.

(ii) The assumed average weight per person is determined as provided by § 170.090 of this title.

(iii) The weight and associated vertical center of gravity of variable loads must be included as appropriate for the service intended and documented in the stability information required by subpart B of this part.

(iv) The vertical center for the total test weight must be at least 30 inches (760 millimeters) above the deck for seated passengers, and at least 39 inches (1.0 meter) above the deck for standing passengers.

(v) If the vessel carries passengers on diving excursions, the total weight of diving gear must be included in the loaded condition and placed in its stowed position. Not less than 80 pounds (36.3 kilograms) should be assumed for each person for which diving gear is provided.

(vi) On vessels having one upper deck above the main deck available to passengers, the weight distribution must not be less severe than the following:

$$\text{Total Test Weight (W)} = \frac{\text{Passenger Capacity of Upper Deck} \times \text{Weight on Upper Deck}}{\text{Passengers on Upper Deck}} \times (\text{Wt per Passenger}) \times 1.33$$

$$\text{Weight on Main Deck} = \text{Total Test Weight} - \text{Weight on Upper Deck}$$

(5) All non-return closures on cockpit scuppers or on weather deck drains must be kept open during the test.

(b) A vessel must not exceed the limitations in paragraph (d) of this section, when subjected to the greater of the following heeling moments:

$$M_p = (W) (B_p) / 6; \text{ or,}$$

$$M_w = (P) (A) (H)$$

Where:

$M_p$  = passenger heeling moment in foot-pounds (kilogram-meters);

$W$  = the total weight of persons other than required crew, plus the personal effects of those persons expected to be carried while aboard the vessel (total test weight) in pounds (meters);

$B_p$  = the maximum transverse distance in feet (meters) of a deck that is accessible to passengers;

$A$  = Area, in square feet (square meters), of the projected lateral surface of the vessel above the waterline (including the hull, superstructure, cargo, masts, area bounded by railings and canopies, but not protruding fixed objects such as antennas or running rigging).

\* \* \* \* \*

(d) \* \* \*

(6) On a non-sailing flush deck catamaran that is propelled by mechanical means, not more than one-third of the freeboard or one-third of the draft, whichever is less, may be immersed.

(7) In no case may the angle of heel exceed 14 degrees.

\* \* \* \* \*

92. Revise § 178.340 to read as follows:

**§ 178.340 Pontoon Simplified Stability Proof Test (PSST).**

(a) A multihull pontoon vessel meeting the applicability requirements of § 178.330(b) and (e) must be in the condition described in § 178.330(a) of this part when the simplified stability test is performed, except that fuel and water tanks should be filled to 100% capacity. Any sewage tanks should be empty or full. If sewage tanks are empty, the weight of full sewage tanks should be simulated by use of additional stationary weight.

(b) A multihull pontoon vessel must not exceed the limitations in paragraph (c) of this section when subjected to the greater of the following heeling moments:

$$M_{pc} = (W) (B_p - K) / 2; \text{ or,}$$

$$M_w = (P) (A) (H)$$

Where:

$M_{pc}$  = passenger and crew heeling moment in foot-pounds (kilogram-meters);

$W$  = the total weight of persons aboard (total test weight) in pounds (kilograms);

$B_p$  = the maximum transverse distance of the deck accessible to passengers in feet (meters);

$K$  = 2.0 feet (0.61 meters);

$M_w$  = Wind heeling moment in foot-pounds (kilogram-meters)  
 $P$  = Wind pressure of 7.5 pounds/square foot (36.6 kilograms/square meter);  
 $A$  = Area, in square feet (square meters), of the projected lateral surface of the vessel above the waterline (including the hull, superstructure, cargo, masts, area bounded by railings and canopies, but

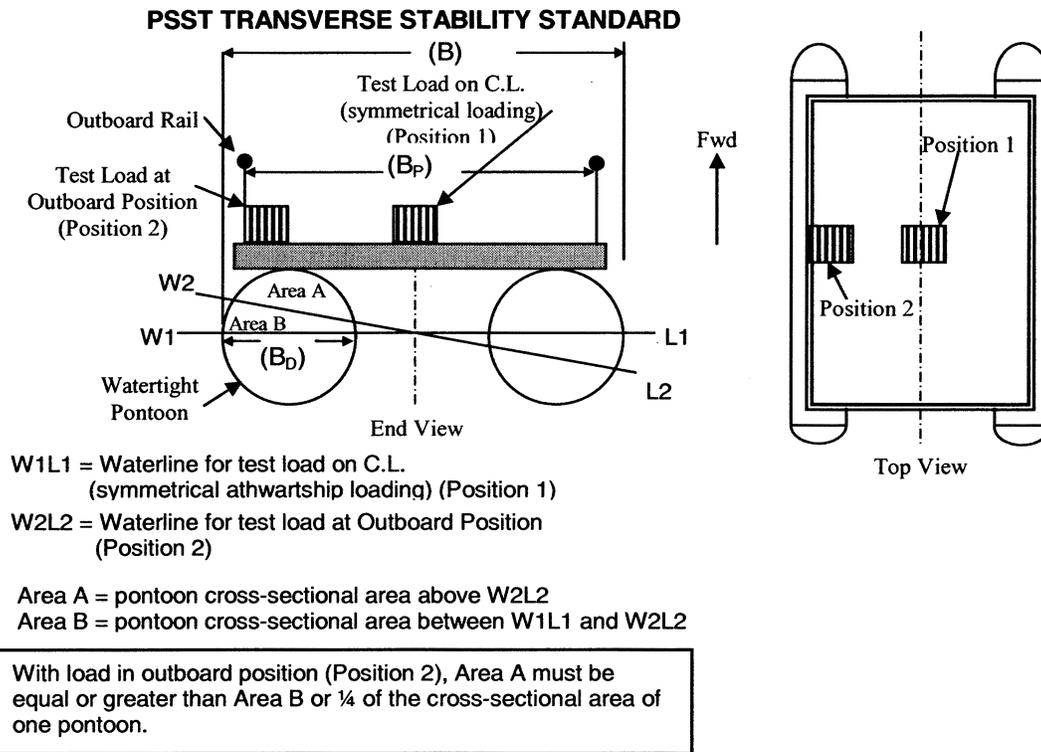
not protruding fixed objects such as antennas or running rigging); and  
 $H$  = Height, in feet (meters), of the center of area ( $A$ ) above the waterline, measured up from the waterline.

(c) With the appropriate heeling moment applied to the most adversely affected side of the vessel, the remaining exposed cross sectional area of the hull,

without consideration of the cross-structure area on that side, must be equal or greater than—

- (1) The cross sectional area submerged due to the load shift (for an example, see Figure 178.340(d)(1)); and,
- (2) One-quarter of the cross-sectional area on one hull.

Figure 178.340 (d) (1)

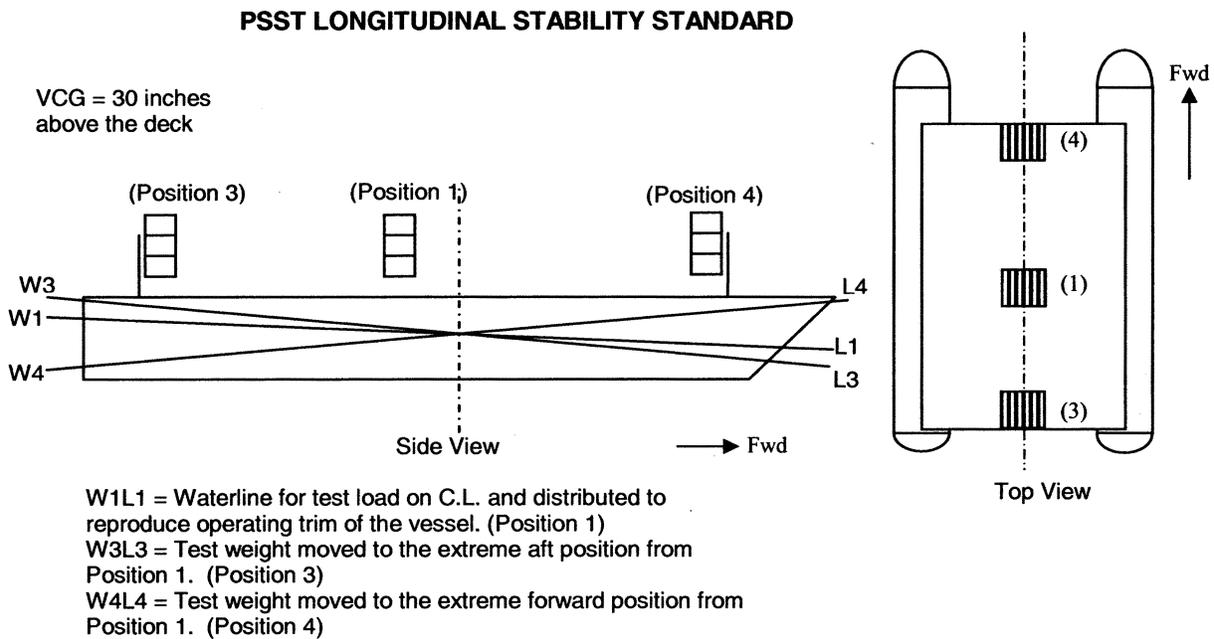


(d) A multihull vessel must also be tested to determine whether trimming moments will submerge the bow or stern of the buoyant hull. The top of any

buoyant hull must not be submerged at any location, as indicated in Figure 178.340(d)(2), with the total test weight ( $W$ ) located on the centerline and

positioned as far forward or aft on the deck as practicable, whichever position results in the least freeboard.

Figure 178.340(d)(2)



With the test load at the extreme aft position (Position 3) and at the extreme forward position (Position 4), the top of the pontoon must not be submerged.

#### PART 179—SUBDIVISION, DAMAGE STABILITY, AND WATERTIGHT INTEGRITY

93. The authority citation for part 179 continues to read as follows:

**Authority:** 43 U.S.C. 1333; 46 U.S.C. 2103, 3306, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

94. Add new § 179.15 to subpart A to read as follows:

##### § 179.15 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a notice of change in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.htm](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.htm). It is also available for inspection at the Coast Guard, Office of Design Engineering Standards, Naval Architecture Division (CG-5212), 2100

Second Street, SW., Washington, DC 20593-0001, and is available from the sources listed in paragraph (b) of this section.

(b) International Maritime Organization (IMO), International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom.

(1) International Convention for the Safety of Life at Sea (SOLAS), 1974, and its Protocol of 1988: articles, annexes and certificates, as amended, chapter II-1 (SOLAS chapter II-1), incorporation by reference approved for § 179.212.

(2) [Reserved]

95. Revise § 179.212 to read as follows:

##### § 179.212 Watertight bulkheads for subdivision.

(a) Each passenger vessel of not greater than 65 feet (19.8 meters) in length must comply with paragraph (b) of this section if it:

(1) Carries more than 49 passengers; or,

(2) Is constructed of wood on or after March 11, 2001, and operates in cold water.

(b) Except as provided in paragraph (d) of this section, each passenger vessel to which paragraph (a) of this section applies must comply with:

(1) The Type II subdivision requirements of §§ 171.070 through

171.073 in subchapter S of this chapter, if the vessel complies with either of the following:

(i) Applicable intact stability requirements contained in subchapter S of this title; or,

(ii) Another stability standard determined by the Commanding Officer, Marine Safety Center; or,

(2) Section 179.220 of this part, if the vessel undergoes a simplified stability proof test in accordance with § 178.330 of this title.

(c) Except as provided in paragraph (d) of this section, each passenger vessel of greater than 65 feet (19.8 meters) in length, or a vessel constructed before 1 January 2009 that is certificated to carry more than 12 passengers on an international voyage, must comply with the Type II subdivision requirements of §§ 171.070 through 171.073 in subchapter S of this chapter.

(d) Each passenger vessel constructed on or after January 1, 2009, and issued a SOLAS Passenger Ship Safety Certificate, must meet the applicable requirements of SOLAS chapter II-1 (incorporated by reference; see § 179.15) instead of the requirements of paragraph (b) or (c) of this section. For the purposes of this section, the applicable requirements of SOLAS chapter II-1 are equivalent to the requirements of paragraph (b) or (c) of this section.

96. In § 179.220—

a. In table 179.220(a) and in note 1 to table 179.220(a), remove the term “d” wherever it occurs and, in its place, add the term “x”; and,

b. Add paragraph (c) to read as follows:

**§ 179.220 Location of watertight bulkheads for subdivision.**

\* \* \* \* \*

(c) Calculations needed to demonstrate compliance with paragraphs (a) and (b) of this section must be submitted to, and approved by, the Commanding Officer, Marine Safety Center.

**PART 185—OPERATIONS**

97. The authority citation for part 185 continues to read as follows:

**Authority:** 46 U.S.C. 2103, 3306, 6101; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

98. In § 185.304, revise paragraph (a)(3) and add paragraph (b) to read as follows:

**§ 185.304 Navigation underway.**

(a) \* \* \*

(3) Prevailing and forecasted visibility and environmental conditions, including wind and waves;

\* \* \* \* \*

(b) Masters of vessels not greater than 65 feet (19.8 meters) in length must have means available, satisfactory to the OCMI, to obtain or monitor the latest marine broadcast in order to comply with the requirements of paragraph (a) of this section.

99. In § 185.315, designate the existing paragraph as paragraph (a) and add paragraph (b) to read as follows:

**§ 185.315 Verification of vessel compliance with applicable stability requirements.**

(a) \* \* \*

(b) In order to fulfill the requirements of paragraph (a) of this section and

avoid overloading the vessel, the master must take into account the total weight of passengers, crew, and variable loads.

**§ 185.602 [Amended]**

100. Amend § 185.602 as follows:

a. In paragraph (b) introductory text, remove the words “that fits into any one of the following categories:” and add, in their place, the words “to which § 178.310(a)(2) of this title applies.”;

b. Remove paragraphs (b)(1) through (b)(3); and

c. In paragraph (c), remove the words “that complies with the stability requirements of §§ 170.170, 170.173, 171.050, 171.055, and 171.057 of this chapter or in accordance with § 178.310 of this chapter.”.

Dated: August 4, 2008.

**Brian M. Salerno,**

*Rear Admiral, U.S. Coast Guard Assistant Comandant for Marine Safety, Security and Stewardship.*

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