

# MSC Guidelines for Preparation of Trim & Stability (T&S) Booklets

Procedure Number: H2-06

Revision Date: 11/7/2017

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## Purpose

The purpose of this Plan Review Guideline is to provide the submitter with general guidance and information for the preparation and submission of Trim & Stability Booklets.

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## References

- a. 46 CFR 170, Subpart D, “Stability Instructions for Operating Personnel”
  - b. Marine Safety Manual, Volume IV – Chapter 6, Section C, “Stability Letters and Trim & Stability Booklets”
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## Contact Information

If you have any questions or comments concerning this document, please contact the Marine Safety Center (MSC) by email or phone. Please refer to the Procedure Number **H2-06**.

Email: [MSC@uscg.mil](mailto:MSC@uscg.mil)

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## General Guidance

- ❑ In preparing Trim & Stability (T&S) booklets, ensure that information on loading restrictions used to determine compliance with applicable intact and damage criteria cover the entire range of operating drafts and trims.
- ❑ T&S booklet must contain reference to the opening and closing of all loading doors, if applicable.
- ❑ Ensure that the maximum draft in the T&S booklet does not exceed the maximum drafts determined by stability calculations, structural design limitations or load line requirements.
- ❑ Units of measure in the booklet should match the units of measure on the vessel’s draft marks.
- ❑ Verify the maximum number of passengers and/or amount of cargo.

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- ❑ If the vessel is engaged in lifting, ensure that the operating information listed in 46 CFR 170.125 is included in the T&S booklet.
- ❑ Ensure the booklet contains the following information (46 CFR 170.110):
  - a. A table of contents and index for the booklet.
  - b. Instructions on the use of the booklet
  - c. General description of the vessel including lightweight data.
  - d. The amount and location of any fixed ballast.
  - e. General precautions and restrictions for normal operation of the vessel.
  - f. General precautions for preventing unintentional flooding.
  - g. Any other necessary guidance for the safe operation of the vessel under normal and emergency conditions.
  - h. Each ship condition which, if damage occurs, may require cross-flooding for survival and information concerning the use of any special cross-flooding fittings.
  - i. General arrangement plans showing watertight compartments, closures, vents, downflooding angles, and allowable deck loading.
  - j. A brief description of the stability calculations performed for the vessel including assumptions.
  - k. Information on loading restrictions, such as maximum KG or minimum GM curve that can be used to determine compliance with applicable intact and damage stability criteria.
  - l. Hydrostatic curves or tables.
  - m. Capacity plan showing capacities and vertical, longitudinal, and transverse centers of gravity of stowage spaces and tanks.
  - n. Tank sounding tables showing capacities, vertical centers of gravity, and longitudinal centers of gravity in graduated intervals and showing free surface data for each tank.

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- o. Examples of loading conditions.
  - p. A rapid and simple means for evaluating other loading conditions.
  - Ensure that the following specific guidance is contained in the T&S booklet:
    - a. No fixed ballast or other such weights shall be added, removed, altered and/or relocated without the authorization and supervision of the cognizant Officer in Charge, Marine Inspection.
    - b. Any openings that could allow water to enter into the hull or deckhouse should be kept closed when rough weather or sea conditions exist or are anticipated.
    - c. The vessel's bilges and voids shall be kept pumped to minimum content at all times consistent with pollution prevention requirements.
    - d. Deck freeing ports shall be maintained operable and completely unobstructed at all times.
    - e. You should make every effort to determine the cause of any list of the vessel before taking corrective action.
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## Disclaimer

This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is not intended to nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. You can use an alternative approach for complying with these requirements if the approach satisfies the requirements of the applicable statutes and regulations. If you want to discuss an alternative, you may contact the Marine Safety Center (MSC), the unit responsible for implementing this guidance.