

MSC Guidelines for Review of Inland Tank Barge Structures and Longitudinal Strength

Procedure Number: C1-12

Revision Date: March 23, 2016

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Purpose:

This Marine Safety Center (MSC) Guideline explains the requirements for plan approval for structures and longitudinal strength plans from the MSC for an Inland Tank Barge regulated under 46 CFR Subchapters O, D, and/or I.

References:

- a. ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways, 2016
 - b. 46 CFR Subchapter D
 - c. 46 CFR Subchapter I
 - d. 46 CFR Subchapter O
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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, and refer to Plan Review Guide Number C1-12.

Email: MSC@uscg.mil

Phone: 202-795-6731

Website: <http://homeport.uscg.mil/msc>

Responsibilities:

The submitter shall provide sufficient documentation and plans to indicate compliance with the applicable requirements from references (a) through (d). The submission shall be made electronically to the above e-mail address or, if paper, in triplicate to the MSC's address found on the above website. To facilitate plan review and project management, all plans and information specified in these guidelines should be submitted as one complete package through a single point of contact for the project.

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General Review Procedure:

- ❑ If the vessel is new and not a sister vessel, has the Application for Inspection been submitted? In general, plan review may not occur until a copy of the Application is received.
- ❑ Does the submission include all necessary information to support compliance with the applicable requirements? At a minimum, submissions should include the following:
 - General Arrangement drawing(s)
 - Scantling plans
 - Structural calculations
 - Any ABS approved plans, as noted in the sections below
- ❑ Did the submitter clearly state what is desired from the MSC? Are all plans to be stamped/returned submitted in triplicate (if submittal is in hard copy)?
- ❑ Is the vessel being reviewed under NVIC 10-82? If yes, then MSC review of structural and longitudinal strength is not required. Plans must be sent to ABS in accordance with NVIC 10-82. Note: Under NVIC 10-82, the MSC must review and approve the general arrangement plan(s).
- ❑ Is the vessel being classed by ABS? If yes, then ABS approval letters for structures and longitudinal strength and a single copy of ABS approved plans must be forwarded to MSC. In accordance with 46 CFR 31.10-1(c) for Subchapter D barges or 46 CFR 92.01-10(a) for Subchapter I barges, the MSC's structural review will complement the items covered by ABS's review.
- ❑ Is the vessel receiving a Load Line assignment from ABS? If yes, then ABS structural approval letters and a single copy of ABS approved plans must be forwarded to the MSC. In accordance with 46 CFR 31.10-1(c) for Subchapter D barges or 46 CFR 92.01-10(a) for Subchapter I barges, the MSC's structural review will complement the items covered by ABS's review.
- ❑ If the barge is greater than 300 ft, has a loading manual been submitted? Per 46 CFR 31.10-32, a loading manual must be submitted that contains the information listed in 46 CFR 42.15-1(a) or 45.105(a). Review of this item is normally conducted in conjunction with the final stability review.
- ❑ Are there any special/unusual requests or a time critical element involved?

General Review Guidance:

- ❑ The hull, structural bulkheads, and decks must be constructed of steel.

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- Per 46 CFR 31.10-1(a), the vessel's structure must meet the requirements of reference (a),
 - Part 3-2-1 for tank barges and/or
 - Part 3-2-3 for barges intended to carry chemical cargoes in bulk.

 - Per 46 CFR 31.10-1(a), all vessels must meet the requirements of reference (a) for the following:
 - Structural arrangement: Part 3-2-1/5
 - Minimum midship section modulus: Part 3-2-1/7.7
 - Deck plating thickness: Part 3-2-1/9
 - Truss scantlings: Part 3-2-1/13
 - Web frame, girder, and stringer scantlings: Part 3-2-1/15
 - Tank head for scantlings: Part 3-2-1/17
 - Bulkhead arrangement: Part 3-2-1/19.1
 - Construction of tank bulkheads: Part 3-2-1/19.3
 - Construction of watertight bulkheads: Part 3-2-1/19.5
 - Side shell and bottom plating: Part 3-2-1/21
 - Hatches and fittings: Part 3-2-1/23

 - For Type I and II Subchapter O barges, verify compliance with the pinnacle grounding requirements of 46 CFR 151.10-20(b) and Part 3-2-3/7.5.3 of reference (a).

 - While not required, a complete GHS or HECSALV model created from the lines, offsets, and structural details will expedite MSC's review.
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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 policy 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 approach, you may contact the Marine Safety Center (MSC), the unit responsible for implementing this guidance.