

**144-001**

**Are stability letters to be issued? If so is that authority retained by the CG? If not, how are we documenting stability issues particularly centers of gravity? NVIC 3-89 may be a pointed to and to some extent the guidance for presenting information to operators for fishing vessels found in Enclosure 1 of NVIC 5-86 may be sources to point to or draw from.**

No. A stability letter issued by the Coast Guard is not required. However, any operating restrictions or directions necessary for the vessel's master or officer in charge of the navigation watch to ensure stability of the vessel(see §140.605) must be documented in a clear and concise manner and maintained onboard the vessel. The development of these restrictions and the concise and easily understood documentation of these restrictions is to be evaluated by an individual or entity qualified to do so (see §144.140). Certain vessels with complex loading and stability conditions may require a Trim and Stability booklet, while others may be best served by a set of operating instructions. Vessel designers are encouraged to review the discussion and general guidance found in Enclosure (1) of NVIC 3-89 Guidelines for Presentation of Stability Information for Operating Personnel when developing operating instructions related to stability in order to provide masters and officers in charge of a navigational watch with sufficient guidance to comply with the requirement of §140.605.

**Received 1 Aug 2016**

**Answered 14 May 2018**

**144-003****By whom and how should the “weight and moment history of changes” be maintained as required in 46 CFR §144.315?**

The vessel’s owner or managing operator should maintain this documentation. For new vessels that must comply with the requirements of 46 CFR §144.315, the owner or managing operator should ensure the vessel’s lightweight characteristics are clearly documented by the individual or entity which verifies compliance with stability standards. That information and subsequent documentation of weight and moment history may be held in any format so long as it is clear to the surveying entity that weight changes are recorded and calculations have been completed which show the effect of the weight movement, addition, or removal on the vessel’s previously documented centers of gravity. A tabular format to record the approved lightweight characteristics and changes thereto is used by the USCG:

Known	Known	Known/Unknown
Mm/dd/yy	Mm/dd/yy	Date
Remove (2) mm engines	Last stability test	Description
Nnn.nnn lbs.	Nnn.nnn lbs.	Displacement/Weight
N.nn ft.	N.nn ft.	LCG (from AP)
N.nn ft.	N.nn ft.	TCG (from CL)
N.nn ft.	N.nn ft.	VCG (above BL)

**Received 1 Aug 2016****Answered 14 May 2018****144-004****Can I use multiple authorized individuals or entities to conduct the design verification required by 46 CFR §144.135?**

Yes, however, as discussed in FAQ 144-005 while there may be more than one person who is employed to help perform a verification of compliance with design standards. The verification of compliance with design standards must include, *inter alia*, the statement required and the identification of the individual or entity who conducted the verification (46 CFR §144.145(b)(4) and (5)). In other words, the one individual or one entity who is identified as required by 46 CFR §144.145(b)(5) must take responsibility for the whole verification of compliance with design standards by making the statement required in 46 CFR §144.145(b)(4). A PE can sign off on/stamp the plan review work performed by qualified people under his or her employ or supervision.

**Received 1 Aug 2016****Answered 14 May 2018**

**144-005**

**1) What evidence must be provided to the surveying entity (the TPO or Coast Guard marine inspector) to prove that an authorized entity or individual has completed verification of compliance with design standards?**

**2) Is it intended that there is one document that serves as verification for all plans, drawings, schematics, and calculations related to a specific construction, repair, or alteration project? That is, does the authorized entity or individual verify the design of the vessel as a whole?**

1) A cover letter or statement from the authorized entity or individual that addresses the items listed in 46 CFR §144.145 (b) would be sufficient objective evidence that the design has been verified.

2) Yes. While it is acceptable for multiple entities, or individuals to conduct verification of portions of a vessel design or alteration, 46 CFR §144.145 (b)(4) requires that the authorized entity or individual attest to the fitness of the vessel for service. This cannot be done unless one entity or individual can review all related plans, drawings, schematics, and calculations related to the design or repair to ascertain if the vessel is fully fit for service. For more information see FAQ 144-004.

**Received 1 Aug 2016**

**Answered 14 May 2018**

**144-007**

**As a vessel owner or managing operator, what are my record keeping responsibilities with regard to verified plans?**

Vessel owners and operators should keep a complete set of verified plans that clearly reflect the “as built” condition of the vessel and any major modifications or alterations. These plans may be used to demonstrate compliance with design standards throughout the life of the vessel.

Therefore, those assuming new ownership of an existing vessel should try to obtain a complete set of plans as part of the purchase agreement.

**Received 1 Aug 2016**

**Answered 14 May 2018**

**144-009**

**Who is the "Coast Guard" in this case? Language is otherwise directive to point to MSC or Commandant. Unlike other subchapters no language exists to point readers to whom.**

For the purpose of §144.140, the Coast Guard is whichever unit performs the verification of compliance with design standards, normally either the MSC or the OCMI.

**Received 1 Aug 2016**

**Answered 14 May 2018**

**144-012**

**Plans for my towing vessel are marked “Verified” by the MSC, is this different than plans marked “Approved” for other inspected vessels such as tank barges?**

To align with the language of Subchapter M, the Coast Guard will use the term “Verified” to indicate any plan, drawing, schematic, calculation, or other document which have been reviewed and accepted by the Coast Guard as demonstrate a vessel’s design, repair, or alteration complies with design standards for the vessel.

**Received 1 Aug 2016**

**Answered 14 May 2018**

**144-013**

**What percentage of wastage will be allowed, what minimum scantlings are required, what minimum plate thickness will be required?**

Minimum scantlings and plate thickness are defined by the structural standards used for the vessel's design and construction. Wastage limits are fairly consistent throughout the marine industry and have not deviated much from those given in NVIC 7-68 for steel. Class standards has this as well (for example, see ABS Rules Part 7, Appendix, Section 4, Table 2, steel wastage allowances for conventional vessels under 90 meters in length shows wastage limits of 25% for main deck, bottom, and keel plating, sheer and bilge strakes; 30% for side shell plating, forecastle and internals and bulkheads. Other class societies have either the same or similar allowable limits).

**Received**

**Answered 14 May 2018**

**144-014**

**Guidance is needed as to what is necessary to demonstrate vessel stability if it is questioned by a TPO or the Coast Guard.**

If the stability of the vessel is questioned by either the TPO or the Coast Guard, §144.300(b)(1) cannot be satisfied and the owner or operator must be able to show compliance with either §144.300(b)(2) or §144.300(b)(3). §144.300(b)(2) allows OCMI's to witness operational testing, to determine whether the vessel has adequate stability and handling characteristics. §144.300(b)(3) offers owners and managing operators an opportunity to present documentation, records, and/or calculations to the Coast Guard to prove adequate stability.

**Received June 2016**

**Answered 25 May 2018**

**144-016**

**When a vessel designed to tow astern is repowered with a resulting change in horsepower, must stability be re-evaluated?**

Yes, vessels that are equipped to tow astern must be evaluated against the towline pull criteria found at 46 CFR part 173, subpart E which is dependent not only on the vessel's geometry but upon the vessel's available shaft power (horsepower). Therefore, regardless of resulting weight changes, changes to available horsepower may trigger a review of the vessel's stability. Further, for existing vessels, attempting to demonstrate satisfactory stability in accordance with §144.300(b)(3), any documentation or evaluation should include details and analysis related to the towline trip criteria.

**Received**

**Answered 14 May 2018**

**Will existing vessels who do not utilize handrails on the outer most portion of the main deck be required to add them or equivalent?**

The requirements of §144.800 and the rest of Subpart H should be applied to existing vessels to the extent considered reasonable and practicable.

**Received 28 Jul 2016**

**Answered 14 May 2018**

**144-023**

**What are the subdivision requirements for towing vessels? What are the scantling requirements? What will be required for electrical penetrations of watertight bulkheads on existing vessels?**

New TVs must comply with ABS standards for both subdivision and scantlings, whether the ABS Under 90M SVR or the ABS River Rules apply depending upon the certification for service (i.e., route). Standards of another recognized classification society may also be used. Any deviations from the selected structural standard used are subject to approval by the MSC. See §144.205.

**Received 21 Jul 2016**

**Answered 14 May 2018**

**144-024**

**Please clarify the applicability requirements of §144.305 so that all verifying entities consistently apply the stability requirements contained in part 170, and part 174.**

The table below, “*Subchapter S Applicability for New Towing Vessels*,” outlines the applicability of the stability standards in Subchapter S by the vessel’s intended route of operations. Only certain provisions in 170 are applicable to all vessels. Additionally, when subparts B and E of part 173 are referenced, the intent is that these only apply to vessels equipped and/or engaged in these operations.

***Subchapter S Applicability for New Towing Vessels***

Stability Route	Applicable Sections and Subparts
All	Part 170, Subpart B – “Definitions”, Subpart I- “Free Surface” and §170.090 and §170.285 provide administrative and technical direction for all verifying entities.
All	Part 170, Subparts F and G apply; where reference is made to the Coast Guard or the Marine Safety Center, the verifying entity is responsible.
All	Part 173, Subpart E is required for a vessel equipped for towing astern.
Protected waters	§170.173(e)(2) applies.
Partially protected waters	§170.170 and §170.173(e)(1) apply.
Exposed waters or assigned a Load Line	§170.170 and §174.145 apply.

**Received 28 Jul 2016**

**Answered 14 May 2018**

**124-025**

**We note Table 144.140 allows for verification of compliance with design standards by a P.E., class society, or the USCG. If requested, would the USCG accept a variety of compliance documentation from these entities (for various systems), or does one of these entities need to produce all of the documentation for any given vessel?**

One individual or one entity must make the statement that the "vessel is suitable for the intended service and route" (§144.145(b)(4)) and, therefore, takes responsibility for all of the reviews performed that determine the design meets the applicable standards. The reviews may be performed by different entities.

**Received 26 Aug 2016**

**Answered 14 May 2018**

**144-029**

**How will the Coast Guard disseminate policy and guidance for towing vessels subject to Subchapter M, both class and non-class?**

Policy letters and other guidance will be disseminated through the USCG Towing Vessel National Center of Expertise (TVNCOE), which can be accessed using the following URL:  
<https://www.dco.uscg.mil/tvncoe/>

**Received 29 Aug 2016**

**Answered 14 May 2018**

**144-032**

**Is the verification of compliance with design standards, as described in 46 CFR 144.145, similar to plan review and approval conducted for other inspected vessels?**

Yes. The verification of compliance with design standards is the process in which an authorized entity, as described in 46 CFR 144.140, verifies that proposed construction plans for a towing vessel comply with all applicable standards. Towing vessels subject to Subchapter M must have their construction or modification plans verified for compliance with design standards prior to construction or modification.

**Received Sep 2016**

**Answered 19 Oct 2016**

**144-033****What is the difference between design verification and plan review by a Professional Engineer or Authorized Classification Society under NVICs 10-82 or 10-92?**

When verification of compliance with design standards is conducted by a licensed professional engineer (PE) in accordance with 46 CFR 144.140, this work is not conducted under the guidance of Navigation and Vessel Inspection Circular 10-92, CH 2 *Coast Guard Recognition of Registered Professional Engineer Certification of Compliance with Coast Guard Requirements*. Plans, drawings, schematics, calculations or other documents used to verify compliance with design standards need not be submitted to the Coast Guard for final approval or authorization.

Similarly, when verification of compliance with design standards is conducted by a classification society in accordance with 46 CFR 144.145, the work is not conducted under the guidance of Navigation and Vessel Inspection Circular 10-82, CH 2 *Acceptance of Plan Review and Inspection Tasks Performed by the American Bureau of Shipping for New Construction or Major Modifications of U.S. Flag Vessels*. Notification to the Coast Guard of the verification activities conducted by the authorized classification society need not be made to the Marine Safety Center.

**Received Sep 2016**

**Answered 19 Oct 2016**

**144-034****Can I still use the Coast Guard survey option if I have used a PE or Authorized Classification Society to conduct design verification?**

Yes, provided that proof of design verification is presented to the Coast Guard at the time which Form CG-3752, "Application for Inspection of U.S. Vessel" is filed with the cognizant OCMI. The OCMI may conduct further review of plans in order to determine objective evidence that the design complies with applicable requirements.

**Received Sep 2016**

**Answered 23 Nov 2016**

**144-035****Can I use multiple individuals or entities to provide objective evidence of compliance with applicable requirements?**

Yes, provided that each individual or entity clearly identify which plans, drawings, schematics, calculations, or other documents were verified including the information required by 46 CFR 144.145(b) (1)-(5). However, since vessel stability, structures, and systems are often interrelated, it is the owner or managing operator's responsibility to inform the individuals or entities verifying the plans of any changes in related plans. Compliance with the requirements of 46 CFR 144.145 (b) may appear on the verified document itself, or in a cover letter. In either case, the verification must be accompanied by the signed and date seal/stamp of the authorized entity. If the verification statement is contained in a cover letter, the letter must also include a list of all applicable plans by number, title, and revision/alteration. An original signature, certification and seal/stamp will not be required on copies of each document provided that the certification is legible; however if the certification is done with a raised seal on an original plan, the information contained thereon must also be reproducible on all copies.

**Received Sep 2016****Answered 19 Nov 2016****144-036****I wish to have the Coast Guard conduct design verification, how do I start the process?**

If the owner or managing operator chooses the Coast Guard option, he must first submit Form CG-3752, "Application for Inspection of U.S. Vessel," to the cognizant OCMI where the construction will take place. The local OCMI will then provide guidance as to which plans are required for submission and identify which, if any, will be forwarded to the MSC for review.

If the owner or managing operator chooses the external TSMS option, plans must be provided to the OCMI and the TPO conducting the survey.

If the owner or managing operator chooses the internal TSMS option, plans must be provided to the OCMI and made available to the TPO conducting audits.

**Received Sep 2016****Answered 19 Oct 2016**

**144-039**

**1) Can an existing towing vessel, which has selected the TSMS option, be expected to meet new vessel standards?**

**2) Are the requirements for means of emergency escape under § 144.500 applicable to existing vessels?**

1) No. An existing vessel cannot be required to meet new vessel standards in situations where the regulations provide separate standards for each. However, an existing vessel is not precluded from voluntarily adopting new vessel standards.

2) § 144.500 discusses three potential paths for addressing means of escape:

1. Two means of escape are required where practicable in each space where crew may be quartered or normally employed.
2. A single means of escape is required if a space meets the provisions of § 144.515.
3. Arrangements on an existing vessel may be retained if it is impracticable or unreasonable to provide two means of escape.

**Received 5 Dec 2016**

**Answered 17 Jan 2017**

**144-040**

**Will dampers (either automatic or manual) over vents, openings, fans, etc. be required to secure ventilation in machinery spaces?**

No. Dampers, whether automatic or manual, are a means, and not the only means, that can be provided to close vents, openings, etc. into machinery spaces.

**Received**

**Answered 14 May 2018**

**144-041**

**How will OCMI's know about new construction in their zone so as they can perform oversight inspection for CG option vessels under Subchapter M?**

There is no specific requirement in Subchapter M regarding new construction oversight or reporting to either the Coast Guard or the TPO. Table 144.135 requires that new vessels undergo verification of design standards prior to the COI being issued.. However, deviations from verified design standards may be required to be corrected in accordance with verified construction plans, causing additional expense and delays to a vessel entering service.

**Received 19 Jan 2017**

**Answered 20 Mar 2017**

**144-042 and 144-044**

**144.105 references certain sections that apply to just new construction. That site references 144.420 and 144.910. I do not see those two listed in the Sub M regulations.**

Thank you for bringing this to our attention. This error has been identified and is on a list of edits to be made in a future round of 46 CFR tech amendments

**Received Feb 2017**

**Answered 21 June 2017**

**Seeking clarification on the term “heater” in 144.515(b). Does this refer to objects such as portable space heaters providing direct heat? Or does it mean literally any source of heating, including permanently installed baseboard or wall-mounted radiators/vents used to control temperature in living spaces?**

46 CFR 144.515(b) states that only one means of escape is required from a space where there is no stove, heater, or other source of fire in the space. The intent of this requirement is that there is no source of fire in the space. A portable heater with an open flame, resistance coil, or fuel source is considered a source of fire. An installed baseboard or wall-mounted radiator/vent used for temperature control in living spaces should not be considered a source of fire.

**Received 17 Mar 2017**

**Answered 4 Aug 2017**

**144-048**

**What will the CG accept for structural repair requirements if an existing towing vessel was built to oversize scantlings?**

The Coast Guard recognizes some towing vessels were not required to be built to a Coast Guard accepted construction standard such as American Bureau of Shipping (ABS) rules.

Repairs should be completed to the standard to which the vessel was built.

However, requests for increased wastage allowance may be submitted in writing to the local OCMI. Request should offer suitable verification, including objective evidence showing the vessel’s scantlings, (frames, girders, plating, etc), should be considered oversized when compared to accepted construction standard(s), such as ABS.

NVIC 7-68 may be referenced for further clarification.

**Received 09 Jun 2017**

**Answered 13 Sep 2017**