



USCG Sector Houston-Galveston Mission Management System (MMS) Work Instruction (WI)

Category	Domestic Vessel Inspection Program				
Title	Cargo Tank Internal Examination (CTIE) Alternatives				
Serial	SHG-WI-INSP-01(01)	Orig. Date	10/27/2025	Rev. Date	N/A
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 public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. Internet release is authorized.				
References:	(a) Marine Safety: Marine Inspection Administration, COMDTINST M16000.70 (b) Marine Safety: Domestic Inspection Programs, COMDTINST M16000.71 (c) Title 46, Code of Federal Regulations, Subchapter D (d) Title 46, Code of Federal Regulations, Subchapter I (e) Title 46, Code of Federal Regulations, Subchapter O				

- A. Purpose. This work instruction provides guidance and raises awareness on the use of cargo tank gauging as an alternative to physical entry into cargo tanks during CTIEs for tank barges with gravity tanks certified for operation on inland routes only, as specified on the vessel's Certificate of Inspection (COI), in the Sector Houston-Galveston Area of Responsibility (AOR), to include MSU Texas City, MSU Port Arthur, and MSU Lake Charles. This work instruction does not apply to pressure vessel tanks, such as those defined in 46 Code of Federal Regulations 151.15-1(d).
- B. Action. Sector Houston-Galveston Marine Inspectors shall reference this guidance when granting CTIE credit to inland tank barges and ensure consistency with established safety and inspection protocols. Industry personnel should reference this guidance when preparing for inland tank barge CTIEs.
- C. Background. In accordance with references (a) through (e), tank vessels operating in the United States must undergo a CTIE to maintain certification. These examinations, whether performed while the vessel is afloat or in drydock, require Coast Guard Marine Inspectors to enter and examine the internals of all cargo tanks. While physical entry into a cargo tank has been the industry standard for many years, it is prudent to explore safer and more cost-effective alternatives, such as cargo tank gauging. By adopting this approach, the Coast Guard can leverage existing proven non-destructive inspection techniques to continue to ensure environmental protection and maritime safety while reducing unnecessary industry burdens and enhancing the safety of personnel.
- D. Discussion. Sector Houston-Galveston is adopting alternatives to physical tank entry during CTIEs. This decision is based on the following:
1. **Comparable Assurance** – Cargo tank gauging and written attestations can provide the same level of confidence in tank condition as physical entry, consistent with existing Sector Houston-Galveston policies.
 2. **Reduced Risk** – Entering cargo tanks for cleaning and inspection exposes personnel to unnecessary health and safety hazards.

3. **Proven Inefficiency** – Decades of data show very few deficiencies are identified through physical CTIEs, highlighting the inefficiency of physical tank entry as opposed to non-destructive inspection techniques.

E. Procedure.

1. Cargo tank boundary material thickness gauging may be used as an alternative to physical entry during CTIEs. This procedure does not amend or change the frequency requirements for each vessel's CTIE, and the hull inspection dates listed on the vessel's COI must be adhered to.
2. Gauging will consist of ultrasonic thickness (UT) testing with measurements conducted in longitudinal bands ("belts") across the cargo tank, with the number of belts determined by the length of the cargo tank as follows:
 - a. Cargo tanks over 50 feet in length at their longest point: three gauging belts will be required.
 - b. Cargo tanks less than 50 feet in length: two gauging belts will be required.
3. Gauging results will be reviewed by a Coast Guard Marine Inspector. Should the gauging results reveal wastage that exceeds minimum scantling requirements, or should the Coast Guard Marine Inspector otherwise require, the cargo tank will be required to be made gas-free by a Certified Marine Chemist for an expanded physical examination. Coast Guard Marine Inspectors also have the authority to expand the scope of UT testing or call out specific points to be measured during the gauging process.
4. Should the cargo tank have points of obvious deformation, either from an external force, or due to wastage, the Coast Guard Marine Inspector may require additional inspections or testing, including an internal inspection, if necessary.
5. When applicable, a signed letter from the barge owner/operator confirming the condition and integrity of any required tank coating must also be provided.
6. Industry personnel may still request that Marine Inspectors conduct a CTIE consisting of physical tank entry, and each such request will be evaluated by the cognizant Sector Houston-Galveston Inspections Division.
7. For non-standard gravity tanks, such as cylindrical tanks not certified for use as pressure vessels, the barge owner/operator may propose NDT strategies not specified herein; however, the Marine Inspector has the discretion to require a full-scope internal inspection.
8. Upon completion of a successful CTIE under this procedure, or via traditional means, the vessel will be granted CTIE credit on the COI.

- F. Questions. For questions regarding this work instruction, please contact the cognizant Sector Houston-Galveston Inspections Division.

N. D. RODRIGUEZ
Captain, U.S. Coast Guard
Commander, Sector Houston-Galveston