

“minimum thickness” to clarify how the minimum head and shell thickness for specification cargo tanks must be determined. The proposal defined “minimum thickness” to mean the least of: (1) The thickness required by the original specification; (2) the thickness required to satisfy the structural integrity and accident damage requirements; or (3) the thickness required to satisfy the requirements of the American Society of Mechanical Engineers (ASME) Code, if applicable. This proposal was intended to eliminate confusion as to whether the minimum thickness tables in § 180.407(i) are the governing factor in determining minimum thickness.

In consultation with members of the Cargo Tank Technical Assistance Group, coordinated through FMCSA, we determined that the proposed definition did not clearly correlate the minimum thickness of the tank with the tank specification requirements. Therefore, in this final rule, we further clarified the definition to read as follows:

Minimum thickness means the minimum required shell and head (and baffle and bulkhead when used as tank reinforcement) thickness needed to meet the specification. The minimum thickness is the *greatest* of the following values:

- (1)(i) For MC 330, MC 331, and MC 338 cargo tanks, the specified minimum thickness found in the applicable specification(s) for construction; or
- (ii) For DOT 406, DOT 407 and DOT 412 cargo tanks, the specified minimum thickness found in Tables I and II of the applicable specification(s); or
- (iii) For MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, and MC 312 cargo tanks, the in-service minimum thickness prescribed in Tables I and II of § 180.407(i)(5), of this subchapter, for the minimum thickness specified by Tables I and II of the applicable specification(s);
- (2) The thickness necessary to meet with the structural integrity and accident damage requirements of the applicable specification(s); or
- (3) The thickness as computed per the ASME Code requirements (if applicable).

In addition, adding minimum thickness determination criteria for MC 331 and 400 series cargo tanks to § 180.407(i) will increase understanding of the requirements by placing all information concerning the thickness of any cargo tank in one section. Thus, new paragraphs (i)(9) and (i)(10) will be added as follows:

- (i)(9) For MC 331 cargo tanks constructed before the date of this final rule, minimum thickness shall be determined by the thickness indicated on the ASME form U1A minus any corrosion allowance. For tanks constructed after the date of this final rule, the minimum thickness will be that which is indicated on the specification plate. If no corrosion allowance is indicated on the ASME form U1A, then the thickness of the

cargo tank shall be the thickness of the material of construction indicated on the form, with no corrosion allowance.

- (i)(10) For 400-series cargo tanks, minimum thickness is calculated according to tables in each applicable section for that specification: § 178.346–2 for DOT 406 cargo tanks, § 178.347–2 for DOT 407 cargo tanks, and § 178.348–2 for DOT 412 cargo tanks.

Cargo tank design includes calculations using the thickness of the tank shell and heads to determine if the tank would meet the minimum structural design requirements less any corrosion allowance. These calculations include a safety factor of 4 that must be maintained throughout the life of the tank. If corrosion is discovered on the tank and the ASME form U1A of the ASME code indicates the shell is .225 inches thick with no corrosion allowance indicated on the ASME form U1A, then any areas on the tank below that thickness must be repaired prior to placing the tank back in service. Clarifying this will provide test and inspection facilities a specific number to determine the thickness of the tank and should simplify calculating corrosion allowances (if any allowance is indicated).

We had also proposed to make a separate paragraph (d) for the definition of “minimum thickness.” We determined that this is not necessary; in this final rule, the definition appears after the term as it is listed in the section. In addition, the wording in § 178.337–3(e) should note that the minimum metal thickness of 0.187 inches for steel and 0.270 inches for aluminum is for tanks with a design pressure of 100 psig. This section outlines regulations for minimum thickness on MC 331 cargo tanks, which are primarily used for the transportation of compressed gasses. Further, we are clarifying that the minimum thickness of the tank shell and heads must be determined using structural design requirements in Section VIII of the ASME Code, or 25% of the tensile strength of the material.

B. Marking of Emergency Shutoff Devices

In response to NTSB recommendation H–93–34, we proposed to amend the HMR in § 172.328 to require all manually activated on-truck remote shutoff devices for closure of the internal valve to be marked “Emergency Shutoff.” The requirement would be effective two years after the publication date of a final rule.

Several commenters suggest that we reconsider the size requirement for the marking. TTMA and NTTC recommended that the minimum

lettering size should be 0.75” instead of the proposed 1.5” height due to the size the overall marking would assume if each letter were 1.5” high. We agree that the 0.75” minimum letter height is adequate to communicate the presence of the emergency shutoff. Therefore, this final rule requires the emergency shutoff device marking to be a minimum 0.75” height.

C. Recertification to Original Specification

There appears to be confusion in the regulated industry as to whether cargo tanks that have been modified for specialized or non-hazardous materials service may be re-certified for hazardous materials service. In the NPRM, we proposed to allow for the re-certification of a cargo tank to its original specification, provided specific requirements are met. These requirements include documentation to verify that the cargo tank was originally manufactured to a DOT specification, verification by a Registered Inspector that the cargo tank is in compliance with the requirements of the specification, and certification that the cargo tank successfully passed all required tests and inspections. In addition, any repairs performed on MC 306, MC 307, or MC 312 cargo tanks after June 30, 1992, must have been performed in accordance with requirements in § 180.413.

An example is an MC 306 cargo tank that has had its internal self-closing stop valve removed so that the cargo tank can be used to transport asphalt. As proposed in the NPRM, § 180.405(b), the cargo tank may be re-certified to its original specification provided an internal shutoff valve is reinstalled, the CTMV meets all other requirements of the specification, and the cargo tank motor vehicle has successfully passed the inspections and tests required in § 180.407(c).

NATC, whose comments are supported by several other commenters, opposes allowing the recertification of cargo tanks. NATC suggests that the proposed change could result in an increase in unsafe cargo tanks and confusion on the part of enforcement personnel who would be unable to verify the cargo tank certifications. In addition, NATC expressed concern that the proposal is unfair to companies that requalified cargo tanks prior to August 31, 1995.

We do not agree that permitting cargo tanks to be re-certified to their original specifications would lead to an increase in unsafe cargo tanks. However, in this final rule we are adding additional language to clarify and ensure a DCE or