



## DEPARTMENT OF TRANSPORTATION

### MATERIALS TRANSPORTATION BUREAU

WASHINGTON, D.C. 20590

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#### Title 49—Transportation

#### CHAPTER I—MATERIALS TRANSPORTATION BUREAU, DEPARTMENT OF TRANSPORTATION

[Docket No. HM-113; Amdt. Nos. 173-91, 177-33]

#### PART 173—SHIPPERS

#### PART 177—SHIPMENTS MADE BY WAY OF COMMON, CONTRACT, OR PRIVATE CARRIERS BY PUBLIC HIGHWAY

#### MC 330 and MC 331 Cargo Tanks Stress Corrosion Cracking

The purpose of these revisions to the amendments made under Docket No. HM-113; Amendments 173-91 and 177-33 is to: (1) authorize the reshipment of anhydrous ammonia without requiring a water content analysis; (2) revise the testing requirements for cargo tanks without manholes, and (3) modify certain portions of the regulations for editorial and clarification purposes.

On June 11, 1975, the Hazardous Materials Regulations Board published regulations in Docket No. HM-113; Amendment Nos. 173-91, 177-83, 178-37 (40 FR 24902) intended to prevent or reduce stress corrosion cracking in MC 330 and MC 331 cargo tanks. Since the publication of the amendments, a number of petitions have been received pertaining to the amendments. These revisions are addressed to those petitions and to other changes of the regulations dealing with stress corrosion cracking.

The provisions of § 173.33(e) (10) require that MC 330 and MC 331 cargo tanks, constructed of quenched and tempered steel or constructed of other than quenched and tempered steel but without post-weld heat treatment, must be internally inspected by the wet fluorescent magnetic particle method. Subsequent to the publication of this requirement which appeared in Docket HM-113, it was determined that there are cargo tanks without manholes which would be required to be internally inspected. It was not the intent of the rule making to require cargo tanks without manholes to be modified to include manholes for these tests. Therefore, § 173.33(e) (10) is revised to indicate that the testing requirements do not apply to cargo tanks without manholes.

The purpose of the Note following § 173.33(e) (10) was to assure that persons who had voluntarily inspected a cargo tank by the wet fluorescent magnetic particle method during the development of the rule making docket would not have to retest that tank sooner than the 5-year period prescribed in the final amendment. Because of the time that transpired between the publication of the Notice of Proposed Rule Making and the issuance of the Amendment, the need for the Note no longer exists.

In paragraphs (a) (1) and (a) (2) of § 177.817, there are references to § 173.315(a) (1) Note 14. These paragraphs are being revised to show reference to § 173.427(a) (3). The reason for this change is that the carrier may or may not accept the shipment based on the information supplied on the shipping papers since he cannot determine whether the requirements prescribed under the note have been satisfied.

Also, several petitions for reconsideration have been received seeking a change to § 173.315(a) (1) Note 14, which requires that a shipper analyze anhydrous ammonia for water content prior to each shipment. Petitioners contend that: (1) Once water is added to the ammonia it becomes part of the composition of that ammonia and permanently remains so; (2) repetitive testing during storage or at the time of shipment from storage is unnecessary because the nature of the product has not changed; (3) certification by the manufacturer at the time of shipment to storage should permit the storage point to properly certify that the same ammonia contains 0.2 percent water at the time of reshipment; (4) each test for water content exposes personnel to certain safety hazards, and if the ammonia has been previously tested and certified this retesting causes a totally unnecessary exposure; and (5) many field storage facilities are not properly equipped nor do they have the trained personnel to perform the required test.

The Bureau has concluded that the petitions have merit and agrees that ammonia can be reshipped without additional tests for water content provided certain requirements have been met. These requirements are as follows: (1) The ammonia must have been certified as containing the prescribed amount of water; and (2) the person reshipping the ammonia must not reduce the amount of water in the ammonia by any means. The testing requirements governing the minimum water content of anhydrous ammonia are applicable to shipments from a storage facility at point of manufacture.

The Bureau has also concluded that Note 14 to the table in § 173.315(a) (1) has become unreasonably lengthy. Therefore, a portion of Note 14 dealing with the preparation of anhydrous ammonia for shipment has been transferred to a newly created paragraph (L) in § 173.315. Appropriate editorial changes have been made to the table in paragraph (a) (1).

In accordance with the foregoing, Amendments 173-91 and 177-33 in Docket HM-113 are amended as follows:

1. In § 173.33 paragraph (e) (10), the Note following the paragraph is deleted; a sentence is added at the close of the paragraph to read as follows:

§ 173.33 Cargo tank use authorization.

(e) . . .

(10) . . . This paragraph does not apply to cargo tanks that do not have man-holes.

NOTE: [Deleted]

2. In § 173.315 paragraph (a) (1), the Table is amended by changing the first entry in column 1 to read, "Anhydrous ammonia (see Note 14 and paragraph (1) of this section)"; Note 14 is revised; paragraph (1) is added to read as follows:

§ 173.315 Compressed gases in cargo tanks and portable tank containers.

(a) . . .  
(1) . . .

NOTE 14: Specifications MC 330 and MC 331 cargo tanks constructed of other than quenched and tempered steel ("NOT") are authorized for all grades of anhydrous ammonia. Specifications MC 330 and MC 331 cargo tanks constructed of quenched and tempered steel ("QT") (see marking requirements of § 177.823(b) (5) of this subchapter) are authorized for anhydrous ammonia having a minimum water content of 0.2 per cent by weight. Any tank being placed in anhydrous ammonia service or a tank which has been in other service or has been opened for inspection, test, or repair, must be cleaned of the previous product and must be purged of air before loading. See §§ 173.427(a) (3) and 177.817(a) (1) of this subchapter for special shipping paper requirements.

(1) Anhydrous ammonia must not be offered for transportation or transported in specification MC 330 and MC 331 cargo tanks constructed of quenched and tempered ("QT") steel except as provided in this paragraph.

(1) The ammonia must have a minimum water content of 0.2 per cent by weight. Any addition of water must be made using steam condensate, de-ionized, or distilled water.

(2) Except as otherwise provided in this paragraph, each person offering for transportation or transporting anhydrous ammonia shall perform a periodic analysis for prescribed water content in the ammonia. The analysis must be performed—

(i) From a sample of the ammonia in storage taken at least once every 7 days, or each time ammonia is added to the storage tanks, whichever is less frequent; or

(ii) At the time the cargo tanks are loaded, then a sample of the ammonia taken from at least one loaded cargo tank out of each 10 loads, or from one cargo tank every 24 hours, whichever is less frequent; or

(iii) At the same frequency as described in subparagraph (ii) of this paragraph, from a sample taken from the loading line to the cargo tank.

(3) If water is added at the time of loading—

(1) The sample for analysis must be taken from a point in the loading line between the water injection equipment and the cargo tank; and

(ii) Positive provisions must be made to assure water injection equipment is operating.

(4) If water injection equipment becomes inoperative, suitable corrective maintenance must be performed after which a sample from the first loaded cargo tank must be analyzed for prescribed water content.

(5) The analysis method for water content must be as prescribed in CGA Pamphlet G-2.2, titled "Tentative Standard Method for Determining Minimum of 0.2 per cent water in Anhydrous Ammonia," 1975 edition.

(6) Records indicating the results of the analysis taken, as required by this paragraph, must be retained for 2 years and must be open to inspection by representative of the Department.

(7) Each person receiving anhydrous ammonia containing 0.2 per cent water by weight may offer for transportation or transport that ammonia without performing the prescribed analysis for water content provided—

(i) The ammonia received was certified as containing 0.2 per cent water as prescribed in §§ 173.427(a) (3) and 177-817(a) (1) of this subchapter; and

(ii) The amount of water in the ammonia has not been reduced by any means.

§ 177.817 [Amended]

In § 177.817 paragraphs (a) (1) and (a) (2) are amended by changing the reference "173.315(a) (1) Note 14 of this subchapter" to read "§ 173.427 of this subchapter."

Effective: These revisions to the Amendments are effective October 1, 1975. However, compliance with the regulations as amended herein is authorized immediately.

(Transportation of Explosives Act (18 U.S.C. 831-835); section 6 of the Department of Transportation Act (49 U.S.C. 1655))

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