DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD
WASHINGTON, D.C. 20590

Title 49—TRANSPORTATION

Chapter I—Hazardous Materials Regulations Board, Department of Transportation

[Docket No. HM-27; Amdt. 173-31]

PART 173—SHIPPERS

Reuse of Specification 17 Series Steel Drums

The purpose of this amendment to the Hazardous Materials Regulations of the Department of Transportation is to prescribe standards for the use of reconditioned and converted steel drums for the shipment of hazardous materials.

On July 23, 1969, the Hazardous Materials Regulations Board issued a notice of proposed rule making, Docket No. HM-27; Notice No. 69-19 (34 F.R. 12187), requesting public comment on a proposal to amend the Hazardous Materials Regulations to prescribe drum reconditioning standards. The proposed standards were, based largely on those that had been by the Bureau of Explosives of the ciation of American Railroads for y years.

The general nature of the comments was in support of the intent of the proposal to prescribe the standards in the regulations rather than relying upon individual case by case subjective evaluations. Most of the comments received dealt with only a very few basic points of the proposal. Most of these comments have been incorporated in one form or another in this amendment. Changes have been made in several sections of the proposed rule as a result of comments received:

(1) The requirement for inspection and replacement of closure devices (including gaskets) has been modified to simplify the language and to state the requirements in more general terms. This revised wording reflects the propriety of methods and techniques presently in use for this purpose.

(2) The procedure for conducting the internal air pressure test of each drum has been modified to allow other testing methods which are at least equivalent to the proposed tests.

(3) The prohibition against repairs of drums has been deleted. The Board believes that the performance standards themselves provide adequate control over any repairs to be made. The limitations in § 173.28 (a) and (m)(1), as proposed, ady preclude any major repairs. The d agrees that minor repairs should lowed as long as the drum is still able of meeting the prescribed standards.

(4) The marking requirements have been simplified. Based on the comments received the Board agrees that the listing of the test pressure is unnecessary. In incorporating a registration number system for drum reconditioners, the Board believes that the registration number itself will provide adequate identification of the locale of the drum reconditioner's plant, so the specific marking of the location is unnecessary.

(5) One commenter indicated that the "type test" referred to in proposed § 173.28(n)(1) required destructive testing of each drum. This was not intended. Since the requirement that the converted drum meet the new specifications provides adequate assurance that the converted drum would be capable of meeting the type test, the specific provision is unnecessary.

(6) A provision has been made in § 173.28(n)(2) to require that the means of attachment of the metal plate be of such a nature as to not adversely affect the integrity of the drum. Methods of attachment such as welding, epoxy bonding, or brazing would be allowed under this provision, so long as they do not adversely affect the integrity of the drum.

Several commenters requested that the reconditioned specification 17 series drums be authorized for shipments of extremely flammable liquids (flash point below 20° F.) and poisons. However, the Board believes that the degree of potential hazard of these materials is sufficiently great that the authorization of used drums would not be in the public interest. On May 9, 1969, in Docket HM-4, the Board pointed out a number of problems involved in the shipping of poisons in light weight steel drums. That matter has still not been resolved, and the Board considers it inappropriate to authorize these high hazard materials in second-hand light weight drums.

Several commenters objected to the requirement that cleaning processes not remove parent metal from the drums. The Board believes that for the specification 17 series drums, there is insufficient allowance for significant reduction of parent metal thickness without a resultant unacceptable loss of integrity of the drum. The provision has therefore been retained.

One commenter objected to the application of a DOT registration number other then the reconditioner's trade symbol. Nothing in this amendment would preclude a reconditioner from marking the drums with his own symbol in addition to the required markings. Furthermore, this amendment does not establish a licensing or certification scheme for directly controlling the industry. The registration is a merely ministerial function to facilitate identification of drum reconditioners. While the Board is considering licensing in this area, and others, such substantive regulation will not take place without separate rule making action. That same commenter recommended that manufacturers be required to emboss the gauge thickness on each removable head rather than requiring this to be done by the reconditioner. The Board agrees that this might be a desirable procedure but believes it would not be appropriate to include in this amendment. The Board will consider that specific recommendation in a future rule making action involving steel drum specifications.

The question of applicablity of these standards to all steel drums (e.g., Specifications 5 and 6 series) arose during the comment period. The Board recognizes that these same reconditioning and testing standards would be appropriate for these drums as well. Another question arose regarding the need for a temperature limitation on the burning process used to remove residue from the drums. The Board considers both of these points to be beyond the scope of this rule-making action. They will be handled later as appropriate.

One commenter pointed out that the process of converting a closed head drum to an open head drum is subject to differences in quality control due to inherent design differences in different drums. The Board is investigating this situation.

Interested persons were afforded an opportunity to participate in this rule-making action and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, 49 CFR Part 173 is amended, effective December 31, 1970. However, compliance with the regulations as amended herein is authorized immediately.

In § 173.28 paragraph (h) is amended; paragraphs (m) and (n) are added to read as follows:

§ 173.28 Reuse of containers.

* * * * *

(h) Except as provided in paragraphs (m) and (n) of this section, single-trip containers made under specifications prescribed in Part 178 of this chapter, from which contents have once been removed following use for shipment of any material, must not be used thereafter for shipment of hazardous materials.

* * * * *

(m) Specifications 17C, 17E, and 17H steel drums (§§ 178.115, 178.116, 178.118 of this chapter), from which contents have been removed, may be reused as packagings for shipments of flammable liquids having flash points above 20° F., flammable solids, oxidizing materials, and radioactive materials, only if the following requirements, in addition to the other requirements of this section, are complied with prior to each reuse:

(1) Each drum must be thoroughly cleaned to remove all residues and foreign matter, inspected for deterioration or defects, and returned to its original shape and contour. All closure devices and parts must be removed (if removable), inspected for defects, and replaced as necessary. Each open head cover gasket must be replaced. Any drum which shows evidence of deterioration (e.g., visible pitting; creases; significant reduction in parent metal thickness from rust, corrosion, or cleaning processes; metal fatigue; or other material defects) or which cannot be returned to its original shape and contour does not qualify for reuse.

(2) The entire surface of each drum must be tested for leakage by constant internal air pressure. The leakage test must be conducted by submersion under water, by completely covering the surface with soap suds or oil, or by some other method that will be equally sensitive. The air pressure must be maintained for a period of time sufficient to permit a complete inspection for leaks. The minimum air pressure for the test must be as follows:

Specification No.	Capacity	Minimum test pressure p.s.i.
17C	All	15
17E	Over 12 gallons	7
	12 gallons or less	5
17H	Over 12 gallons	7
	12 gallons or less	5

If leaking, the drum does not qualify for reuse.

(3) Marking:

(i) All previous test markings, commodity identification markings, and labels must be removed.

(ii) The outside of each drum qualifying for reuse under this section must be marked on the body within 10 inches of the top head, in letters of a contrasting color with the following information: "Tested", the month and year of the test, and the DOT registration number of the reconditioner. For example:

TESTED 2/70
DOT R1001

The registration number required for this marking must be obtained from the Office of Hazardous Materials, Department of Transportation, Washington, D.C. 20590.

(iii) The outside of each removable head, for drums over 5 gallons capacity, must be marked to indicate the gauge of the steel used in making the head (e.g., "16-gauge").

(iv) Marking must conform to the requirements of § 173.24.

(n) Any drum meeting one specification which has been altered to meet another specification must be capable of meeting the new specification in all respects.

(1) Each drum so altered must be inspected and tested in accordance with paragraph (m) of this section.

(2) The specification marking on the drum must be as required by the new specification, and must be on a metal plate securely attached to the drum. The means of attachment of the metal plate must not adversely affect the integrity of the drum. The plate must be located on the body within 10 inches from the top head. The marking must conform to § 173.24. If the rated capacity is reduced by more than 2 percent, the new rated capacity must be shown. Both the old and the new specification identification must be shown with the specification to which the drum is converted shown last, e.g., "17E/17H".

(Secs. 831–835, title 18, United States Code; sec. 9, Department of Transportation Act (49 U.S.C. 1657); title VI, sec. 902(h), Federal Aviation Act of 1958 (49 U.S.C. 1421–1430, 1472(h)))

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C. R. BENDER,
Admiral, U.S. Coast Guard,
Commandant.

CARL V. LYON,
Acting Administrator,
Federal Railroad Administration.

F. C. TURNER,
Federal Highway Administrator.

SAM SCHNEIDER,
Board Member for the
Federal Aviation Administration.

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