DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 172, 173, 174, 176, 177, 178, and 179

[Docket No. HM-166R; Amdt. Nos. 172-96, 173-185, 174-47, 176-21, 177-65, 178-83, and 179-37]

Shipment of Hazardous Materials; Miscellaneous Amendments

AGENCY: Materials Transportation Bureau (MTB), Research and Special Programs Administration, DOT.

ACTION: Final rule.

SUMMARY: This action is being taken to incorporate into the Department's Hazardous Materials Regulations a number of changes based on rulemaking petitions from industry and on initiations within the Department. This action is necessary to update the regulations, to eliminate the need for filing of reports with MTB and to reduce MTB's backlog of rulemaking petitions.

All of the amendments in this rulemaking are designed to reduce government regulation and paperwork, and to clarify existing regulations.

EFFECTIVE DATE: This amendment is effective July 1, 1985. However, compliance with the regulations as amended herein, is authorized as of March 19, 1985.

FOR FURTHER INFORMATION CONTACT: Darrell L. Raines, Chief, Exemptions and Regulations Termination Branch, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Washington, D.C. 20590 (202-426-2075).

SUPPLEMENTARY INFORMATION: On March 22, 1984, the MTB published a Notice of Proposed Rulemaking, Docket No. HM-166R; Notice No. 84-3 (49 FR 10780), which proposed a number of miscellaneous amendments to the Hazadous Materials Regulations. Notice No. 84-3 included a brief statement regarding each proposal and invited public comment prior to the closing date of June 29, 1984. Based on comments received on the notice, those proposals are incorporated as final amendments to the Hazardous Materials Regulations (HMR).

Eighteen commenters responded to Notice 84-3.

Six commenters objected to the proposed change to § 173.34(e)(10) to add DOT Specification 3AA cylinders for argon, helium, nitrogen, oxygen, breathing air and dry compressed air. Each commenter objected very strongly that the proposed amendment would not be in the best interest of safety. In view of the objections and upon further consideration the proposed amendment has been withdrawn from this rulemaking.

One commenter objected to (1) Having two complete entries for the same compound (i.e., "Acetonitrile" and "Methyl cyanide") and (2) "Fluosilicic acid" and "Hydrofluorosilicic acid or Hydrofluosilicic acid". This same commenter also recommended that further alignment of the § 172.101 Table and the § 172.102 Table should be undertaken for certain hazardous materials. That recommendation will be considered under separate rulemaking.

One commenter requested that the MTB consider adding nitrous oxide to the list of commodities that were proposed for addition to DOT § 173.34(e)(10). In view of the objections discussed above, no action is being taken to add nitrous oxide to § 173.34(e)(10).

One commenter proposed that the amendment to § 173.7(a) include all hazardous materials shipment exemptions involving items listed in 22 CFR, International Traffic in Arms Regulations be issued by DOD for both domestic and international shipments where a DOD contract has been let for the item manufacture or development. This would allow continued shipping of the items to foreign military customers not involved in a DOD contract provided the item in question has had no Class 1 engineering changes made to it. The suggested change goes far beyond what was proposed in notice and cannot be considered for adoption at this time.

Two commenters objected to the proposed amendment of adding ammonium persulfate, potassium persulfate, and sodium persulfate to the § 172.101 Table as oxidizers because they considered this to be a controversial issue. In addition, they referred to the work that is being done on this subject under Docket No. HM-179. The MTB does not agree that this is a controversial matter and has added ammonium persulfate, potassium persulfate, and sodium persulfate to the § 172.101 Table as proposed in the notice. The decision to add these materials as oxidizers is based on test data submitted by a petitioner. Testing was completed by the Bureau of Explosives (B of E) of the Association of American Railroads in October 1984 and the B of E Chemical Laboratory Report on the tests indicates that the three materials, as tested, are oxidizers under the DOT regulations. Ammonium persulfate, UN1444, potassium persulfate, UN1492 and sodium persulfate, UN1505 are classed as 5.1 under the United National Transport of Dangerous Goods and the IMDG Code. Entering these materials in the Hazardous Materials Table does not automatically mean that all such materials produced by other manufacturers are oxidizers. Tests may show that a similar product produced by another manufacturer may not be an oxidizer because of slightly different properties.

The proposed amendments to § 173.119 (a)(17), (e)(3), (e)(3)(i) and (f)(5) to add DOT Specification MC 310, MC 311 and MC 312 cargo tanks inadvertently omitted any reference that these particular cargo tanks must be equipped with pressure relief devices as required for DOT Specification MC 306 and MC 307 cargo tanks. That requirement has been added in the final rule.

The National Transportation Safety Board (NTSB) offered general comments and specific comments on three topics. The general comments were critical of the notice and of the way MTB identifies and classifies hazardous materials. The NTSB expressed the view that safety analyses should be performed in depth for each quantity and form of material in transportation. The NTSB is of the opinion that no changes should be made to classify or reclassify a hazardous material unless a safety analysis has been completed and such analyses should be used to evaluate all materials within similar chemical groups. NTSB also made reference to two accidents involving aluminum chloride.

The NTSB comments on specific proposals are quoted as follows:

1. *Aluminum Chloride.* This material has not been regulated as a hazardous material for the more than a dozen years during which agencies within DOT (Transportation Safety Institute and U.S. Coast Guard) have known that aluminum chloride presents a serious transportation risk. It is not clear why only aluminum chloride has been singled out for action with the limited information on the properties of a corrosive solid provided in 49 CFR 173.240. Because shippers have failed to recognize that aluminum chloride when contaminated with moisture presents a major hazard, there may be other materials with properties similar to aluminum chloride that presently are being shipped as "unregulated" or not listed in Table 172.102, such as aluminum carbide, calcium hydride, and phosphorus pentoxide.

2. *Hexamethyleneimine (HEX).* As stated in the NPRM, the flash point of this material is 65 °F (cc) which requires that it be classified as flammable rather than corrosive. MTB staff assured the Safety Board staff that HEX was the only product with flammable properties which was inappropriately classed in Table 172.101 as a corrosive. Consequently, future rulemaking was not

anticipated for other similar materials. However, our cursory review of materials listed as corrosive revealed three (3) similar products in Table 172.101 listed as corrosive which also have flash points (cc) under 100 °F.[1] These products are allyl trichlorosilane, 95 °F, cc; phenyl trichlorosilane 91 °F, cc; and valeryl chloride 74 °F, cc. Therefore, shippers may not be identifying the primary hazard of these materials for transportation. This finding further supports the need for a systematic review of the hazardous material classifications and the need for the DOT to act on our Safety Recommendation I–81–14.

3. *Persulfates.* We could not find in the NPRM any specific reason for including in Table 172.101 the three (3) additional persulfates. Referenced Coast Guard literature identifies these materials as strong oxidizers as does the UN classification system. However, similar materials are listed in the Optional Hazardous Material Table 172.102 as oxidizers, but are not listed in Table 172.101. Since the rationale to include some materials in Table 172.101 and exclude others with similar properties has not been provided by MTB, meaningful comments about the need for such changes cannot be provided.

The MTB proposed to add aluminum chloride, anhydrous as a corrosive material to the Hazardous Materials Regulations in 1970. However, because of unfavorable public comments, aluminum chloride was withdrawn pending further investigation of the material. The MTB recognizes the fact that aluminum chloride, anhydrous is not corrosive to skin when tested according to the method specified in Appendix A to Part 173. The reason the chemical does not destroy the skin of a rabbit is that the rabbit does not perspire and its skin is dry. However, since 1970 paragraph (b) to § 173.240 has been added which reads "If human experience or other data indicate that the hazard of a material is greater or less than indicated by the results of the tests specified in paragraph (a) of this section, the Department may revise its classification or make the material subject to the requirements of Parts 170–189 of this subchapter". Since it is very unlikely that aluminum chloride can exist outside of its shipping container without being in contact with some moisture, the material is hereby added to the § 172.101 Table as proposed. Also, MTB was aware of the accident in Stroudsburg, Pennsylvania mentioned by NTSB. It was this accident that prompted MTB to take action concerning aluminum chloride in this rulemaking.

In regard to hexamethyleneimine, the MTB is not absolutely sure that there is no other product in the § 172.101 Table with flammable properties which is classed as a corrosive nor do we recall ever making such a statement.

The proposed persulfates entries were added based on a petition from a large shipper of hazardous materials who requested relief from dual marking requirements. Each of the three persulfates listed in the notice are listed by name and classed as an oxidizer in the § 172.102 Table, ICAO Technical Instructions, and the IMDG Code.

The Association of American Railroads (AAR) submitted a late comment regarding the proposed change to § 174.104(b)(6). It would require that the rail carrier who furnishes a car to a shipper for loading Class A explosives decontaminate the car when it is clear that the floor or walls of the car are saturated with a foreign material that may be a hazardous material. If decontamination is not feasible, the carrier must furnish a substitute car.

The AAR stated in part that they were mystified as to the reason this proposal has been put forth, that they were not aware of any contamination problems in rail cars transporting explosives, and wondered why MTB suggested such a vague rule. They also inquired about what the word "apparent" meant? Would a carrier be required to analyze any unidentifiable residue? They felt that this amendment, given its ambiguity, and the lack of a reason for its promulgation, should be withdrawn.

The MTB does not agree with the AAR that the proposal should be withdrawn. The contamination problem is not considered to be an everyday occurrence. However, MTB does believe that in view of the potential for a major incident that all possible precautions should be taken. The word "apparent" as defined in Webster's dictionary means: (1) Visible; readily seen, (2) readily understood, evident, obvious. MTB believes that if a car is swept out and the shipper sees that there is a substance of some kind on the floor, or the sides, or ends of the car, there is reason to further investigate what the residue is. A visual examination may be all that is needed to determine whether a particular car should be loaded with explosives or a substitute car is required. The need to have the carrier analyze an unidentifiable residue is not likely to occur. If a controversial situation did arise between the shipper and the carrier, it would probably be faster and easier to use a substitute car.

At the present time, the regulations do not have a provision for rejection of rail cars suspected of being contaminated. The NTSB in their report on the Benson, Arizona, incident on May 24, 1973, commented that the regulations are vague as to how and who is responsible for cleaning residue from cars.

The Materials Transportation Bureau has determined that this regulatory amendment is not a major rule under the terms of Executive Order 12291 or significant under DOT's regulatory procedures (44 FR 11034), and does not require a Regulatory Impact Analysis, nor does it require an environmental impact statement under the National Environmental Policy Act (42 U.S.C. 4231, et seq.). A regulatory evaluation is not warranted since the anticipated impact is minimal.

Based on information available concerning size and nature of entities likely to be affected, I certify that these amendments will not, as promulgated, have a significant economic impact on a substantial number of small entities.

List of Subjects

49 CFR Part 172

Hazardous materials transportation, Labeling, Packaging and containers.

49 CFR Part 173

Hazardous materials transportation, Packaging and containers.

49 CFR Part 174

Hazardous materials transportation, Railroad safety.

49 CFR Part 176

Hazardous materials transportation, Maritime carriers.

49 CFR Part 177

Hazardous materials transportation, Motor carriers.

49 CFR Part 178

Hazardous materials transportation, Packaging and containers.

49 CFR Part 179

Hazardous materials transportation, Railroad safety.

In consideration of the foregoing, 49 CFR Parts 172, 173, 174, 176, 177, 178 and 179 are amended as follows:

PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

1. In § 172.101, paragraph (i)(1) is revised; (i)(4), (i)(5), and (i)(6) are redesignated as (i)(6), (i)(7), and (i)(8); paragraphs (i)(2) and (i)(3) are redesignated as (i)(4) and (i)(5) and are revised; and new paragraphs (i)(2) and (i)(3) are added to read:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

(i) * * *

(1) "1" means the materials must be stowed "on deck" subject to the requirements of § 176.63(b) of this subchapter. When both "on deck" and "under deck" are authorized, "under deck" should be used if available.

(2) "1,2" means the material must be stowed either "on deck" or "under deck"; however, "under deck" should be used if available.

(3) "1,3" means the material must be stowed either "on deck" or "under deck away from heat"; however, "under deck away from heat" stowage should be used if it is available.

(4) "2" means the material must be stowed "under deck" in a compartment or hold subject to the requirements of § 176.63(c). When both "on deck" and "under deck" are authorized, "under deck" should be used if available.

(5) "3" means the material must be stowed "under deck away from heat" in a ventilated compartment or hold subject to the requirements of § 176.63(d) of this subchapter.

* * * * *

2. Section 172.101, the Hazardous Materials Table is amended by adding, removing or revising the entries listed below:

§ 172.101 Hazardous Materials Table

+ EAW	Hazardous materials descriptions and propery shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	Packaging		Maximum net quantity in one package		Water shipments		Other requirements
					Exceptions	Specific requirements	Passenger carrying *aircraft or* railcar	Cargo aircraft *only*	Cargo vessel	Passenger *vessel*	
(1)	(2)	(3)	(3a)	(4)	5(a)	5(b)	6(a)	6(b)	7(a)	7(b)	7(c)
	ADD										
	Aluminum chloride, anhydrous.	Corrosive material.	UN1726	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry.
	Ammonium persulfate.	Oxidizer	UN1444	Oxidizer	173.153	178.154	50 pounds	200 pounds	1,2	1,2	
	Diacetone alcohol	Combustible liquid.	UN1148	None	173.118a	None	No limit	No limit	1,2	1,2	
	Fluosilicic acid	Corrosive material.	UN1778	Corrosive	None	173.265	1 quart	1 gallon	1,2	1,2	
	Hydrofluorosilicic acid *or* Hydrofluosilicic acid.	Corrosive material.	NA1778	Corrosive	None	173.265	1 quart	1 gallon	1,2	1,2	
	Methyl cyanide	Flammable liquid.	UN1648	Flammable liquid.	173.118	173.119	1 quart	10 gallons	1	4	Shade from radiant heat.
	Potassium persulfate	Oxidizer	UN1492	Oxidizer	173.153	173.154	50 pounds	200 pounds	1,2	1,2	
	Sodium persulfate	Oxidizer	UN1505	Oxidizer	173.153	173.154	50 pounds	200 pounds	1,2	1,2	
	Sodium sulfide, anhydrous *or* Sodium sulfide *with less than 30% water of crystallization.*	Flammable solid.	UN1385	Flammable solid.	173.153	173.207	25 pounds	100 pounds	1,2	1,2	Stow separated from liquid acids.
	Sodium sulfide, hydrated *with not less than 30% water.*	Corrosive material.	UN1849	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Stow away from acids.
	Trichloroisocyanuric acid, dry.	Oxidizer	UN2468	Oxidizer	173.153	173.217	10 pounds	50 pounds	1,2	1,2	Shade from radiant heat. Keep dry, stow separated from nitrogen compounds.
	REMOVE										
	Aircraft rocket engine (Commercial).	Flammable solid.	NA2791	Flammable solid.	None	173.238	Forbidden	550 pounds	1,3	5	
	Aircraft rocket engine igniter (Commercial).	Flammable solid.	NA2792	Flammable solid	None	173.238	Forbidden	25 pounds	1,3	5	
	Cartridge cases, empty, primed.	Class C explosive.		None	None	173.107	50 pounds	150 pounds	1,3	1,3	
	Hydrofluorosilicic acid.	Corrosive material.	NA1778	Corrosive	None	173.265	1 quart	1 gallon	1,2	1,2	
	Sodium sulfide, anhydrous.	Flammable solid.	UN1385	Flammable solid.	173.153	173.207	25 pounds	300 pounds	1,2	1,2	Stow separate from liquid acids. Separate from flammable gases or liquids, oxidizing materials or organic peroxides.
	REVISED										
	Hexamethyleneimine	Flammable liquid.	UN2493	Flammable liquid and Corrosive.	None	173.119	1 quart	1 gallon	1,2	1	
+ E	Motor fuel antiknock compound *or* Antiknock compound (*these materials may contain various hazardous substances for which the appropriate RQ applies*).	Poison B	UN1649	Poison	None	173.354	Forbidden	55 gallons	1	5	If flashpoint less than 141. deg. F. segregation same as for flammable liquids.

+EAW	Hazardous materials descriptions and propery shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	Packaging		Maximum net quantity in one package		Water shipments		
					Exceptions	Specific requirements	Passenger carrying aircraft or railcar	Cargo aircraft only	Cargo vessel	Passenger vessel	Other requirements
(1)	(2)	(3)	(3a)	(4)	5(a)	5(b)	6(a)	6(b)	7(a)	7(b)	7(c)
	Trichloro-s-triazine-trione dry, *containing over 39% available chlorine.*	Oxidizer	NA2468	Oxidizer	173.153	173.217	50 pounds	100 pounds	1,2	1,2	Shade from radiant heat. Keep dry. Stow separated from nitrogen compounds.

3. In § 172.101, the last sentence of the first paragraph of the note preceding the CERCLA list is revised to read as follows:

CERCLA List

Note.—* * * With respect to other materials in the following listing, those that are not forbidden materials or do not fall within a hazard class defined in this subchapter are not subject to the requirements of this subchapter.

* * * * *

4. In § 172.504, paragraph (c) is revised to read as follows:

§ 172.504 General placarding requirements.

* * * * *

(c) When the gross weight of all hazardous materials covered by Table 2 is less than 1000 pounds, no placard is required on a motor vehicle, rail car, or freight container for the Table 2 materials. A Table 1 material must be placarded as specified in Table 1. This paragraph does not apply to a portable tank, cargo tank, tank car, or to transportation by aircraft or vessel.

* * * * *

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

5. In § 173.7, the intoductory text of paragraph (a) is revised to read as follows:

§ 173.7 U.S. Government material.

(a) Hazardous materials offered for transportation by, for, or to the Department of Defense (DOD) of the U.S. Government, including commercial shipments pursuant to a DOD contract, must be packaged in accordance with the regulations in this subchapter or in packagings of equal or greater strength and efficiency as certified by DOD pursuant to the "Policies and Procedures for Hazardous Materials Packaging Certification, AFLCR 800-29/AFSCR 800-29/DARCOM-R 700-103/NAVMATINST 4030.11/DLAR 4145.37." Hazardous materials offered for transportation by DOD under this provision may be reshipped by any shipper to any consignee provided the original packaging has not been damaged or altered in any manner.

* * * * *

6. In § 173.31, paragraphs (a)(2), (c)(9), (c)(10), and Retest Table 1 in paragraph (c)(13) and footnotes c, f, j, q, r, u, v, and w are revised to read as follows:

§ 173.31 Qualification, maintenance, and use of tank cars.

(a) * * *

(2) Tanks prescribed in the following table are authorized for service provided they conform to all applicable safety requirements of this subchapter:

Specifications prescribed in current regulations	Other specifications permitted (subject to the notes)	Notes
105A200W	105A100W	1
105A 200A LW	105A100A LW	1
105A300W	ICC-105, 105A300	
105A400W	105A400	
105A500W	105A500	
105A600W	105A600	
106A500X	ICC-27, BE-27, 106A500	
106A800X	106A800	
107A * * *		2

NOTE 1.—Tanks built as Spec. DOT-105A100-W or 105A100AL-W may be altered and reclassified as Spec. DOT 105A200W or 105A200ALW, respectively, by installing safety relief valves, retesting and stenciling in accordance with the applicable specification.

NOTE 2.—The test pressures of tanks built in the United States prior to January 1, 1956, may be increased to conform with current Spec. DOT-107A except that tanks built prior to 1941 are not authorized. Original and revised test pressure must be indicated and may be shown on a plate attached to the bulkhead of the car.

* * * * *

(c) * * *

(9) After repairs requiring welding, riveting, caulking of rivets, or hot or cold forming to restore tank contour, tanks must be retested at the presure specified in Retest Table 1 of this paragraph before being returned to service. Glass, lead, rubber, elastomeric or polyvinyl chloride lined tanks must be retested before lining is renewed or after lining is removed. Interior heater systems must be retested before the tank is returned to service after repairs or renewals of any part of the system.

(10) The year of a pressure test, the pressure to which it was tested, and tests due dates for the tank, pressure relief valve and interior heating system must be stenciled on the tank (or on the tank jacket if the tank is insulated). If a retest is required during a particular calendar month, the month and the year must be stenciled. On existing cars, the test due date stencil must be applied at the next test date or tank painting whichever comes first. Any pressure relief valve from a stock which has been tested within six months of installation may be considered as having been tested or retested in the month in which installed, providing the valve has been protected from deterioration during this period.

* * * * *

(13) * * *

RETEST TABLE 1

Specification	Car age and retest interval (years[1])			Restest pressure—p.s.i.			
	Tank and interior heater systems			Pressure relief valve			
	Up to 10 years old	Over 10 to 22 years old	Over 22 years old	Pressure relief valve	Tank	Start to discharge	Vapor tight
REVISE							
DOT-103		10	10	10	60	[c]35	28
DOT-103A		3	1	2	60	35	28
DOT-103A-ALW[q]	[d]5	3	1	(*)	60	[b]35	28
DOT-103B		[f]3	[f]1	None	60		
DOT-103C		3	1	(*)	60	35	28
DOT-104		10	10	10	60	[c]35	28
DOT-104A		10	10	5	100	75	
DOT-105A100[uv]		10	10	5	100	75	60
DOT-105A200ALW[uv]	10	10	10	5	200	150	120
DOT-105A300[u]		[e]10	[e]10	[e]5	300	[e]225	180
DOT-105A300W[uv]	10	10	10	5	300	225	180
DOT-105A400[u]		[e]10	[e]10	[e]5	400	[m]300	240
DOT-105A500[u]		[e]10	[e]10	[e]5	500	[b]375	300
DOT-105A600[u]		[e]10	[e]10	[e]5	600	450	360
DOT-111A60ALW1[q]	10	10	10	10	60	35	28

RETEST TABLE 1—Continued

Specification	Car age and retest interval (years[1])			Restest pressure—p.s.i.			
	Tank and interior heater systems			Pressure relief valve			
	Up to 10 years old	Over 10 to 22 years old	Over 22 years old	Pressure relief valve	Tank	Start to discharge	Vapor tight
DOT-111A60ALW2[c]	[d]5	3	1	(e)	60	35	28
DOT-111A60F1[c]	10	10	10	10	60	35	28
DOT-111A60W1[c]		[c]20	10	10	60	35	28
DOT-111A60W5	[f]5	[f]3	[f]1	None	60		
DOT-111A100ALW1[c]	10	10	10	10	100	75	60
DOT-111A100ALW2[c]	5	3	1	(e)	100	75	60
DOT-111A100F1[c]		10	10	10	100	75	60
DOT-111A100W1[c]		[c]20	10	10	100	75	60
DOT-112A340W[g]	10	10	10	5	340	[h]255	[h]204
DOT-112A400F[g]		10	10	5	400	300	240
DOT-112A400W[g]	10	10	10	5	400	[h]300	[h]240
DOT-112A500W[g]	10	10	10	5	500	[h]375	300
DOT-114A340W[g]	10	10	10	5	340	[h]255	[h]204
DOT-114A400W[g]	10	10	10	5	400	[h]300	[h]240
DELETE [i]							
DOT-103CAL		2	1	(j)	60	35	28
EMERG, USG-A, B, and C		10	10	10	60	25	
ARA-III		10	10	60	[c]25	20	
ARA-III acid (unlined)			1	None	60		
ARA-III (rubber lined)			(f)	None	60		
ARA-IV			10	10	60	[c]25	20
ARA-IV-A			10	5	100	35	28
ARA-V			[c]10	[c]5	300	[c]225	180

[c] Class 103 and 104 tank cars built before January 1, 1959 and equipped with 25 psi pressure relief valves may remain in service with start-to-discharge retested at 25 psi, vapor tight at 20 psig.

[f] Nickel clad tanks in bromine service and any glass, rubber, lead, or elastomeric lined tank need not be periodically retested, but the interior heater systems and pressure relief valves must be retested at the prescribed interval. For testing requirements for glass, rubber or other lined tanks see paragraphs (c)(9), (c)(11), and (c)(12) of this section.

[d] When the retest interval changes due to the age of the tank, the new retest interval must be measured from the last retest date but in no case shall the time between retests exceed the interval specified in Table 1 for the age of the tank. The retest of a tank because of repairs may alter the normal retest schedule specified in the table.

[g] Tanks must be retested at the time they are converted from existing pressure type tanks to a non-pressure specification. When tanks are converted to DOT 103A-ALW from DOT 103ALW or AAR 201A70W, the tank must be retested at the time of conversion if welding on the tank is performed. For future retests of converted tanks, the retest interval must be selected from the table based on the age of the tank computed from the date converted instead of the date built. The conversion date must be stenciled on the tank below the built date.

[i] When tanks are converted to DOT-103AW from existing DOT-103W or 103AW tanks, the tank must be retested at time of conversion if welding on the tank is performed. Lined tanks must be retested before the lining is renewed or after the lining is removed. For future retests, the retest interval must be selected from the Table as though the tank were 10 years old at time of conversion. The conversion date must be stenciled on the tank below the built date.

[j] Tank cars stenciled 105S, 105J, 112S, 112T, 112J, 114S, 114T or 114J have the same retest requirements as 105A, 112A, or 114A, respectively.

[e] Pressure tank cars authorized for corrosive materials service must have tank and pressure relief valve retested when removed from the service and prior to return to compressed gas service.

[h] Tank cars stenciled 105S or 105J have the same retest requirements as 105A.

7. In § 173.32, the introductory text of paragraph (a) is revised to read as follows:

§ 173.32 Qualification, maintenance and use of portable tanks other than specification IM portable tanks.

(a) Except as otherwise provided in this section, each portable tank used for the transportation of hazardous materials must conform to the requirements of the specification and regulations for the transportation of the particular commodity. Except for Specification 56 and 57 portable tanks, a manufacturer's data report of the portable tank must be procured and retained in the files of the owner during the time that such portable tank is used for such service.

* * * * *

8. In § 173.32a, paragraph (e) is removed and reserved as follows:

§ 173.32a Approval of Specification IM portable tanks.

* * * * *

(e) [Reserved]

* * * * *

9. In § 173.33, the introductory text of paragraph (d)(12) and paragraph (d)(13) is revised to read as follows:

§ 173.33 Qualification, maintenance, and use of cargo tanks.

* * * * *

(d) * * *

(12) *Reports required.* Each motor carrier operating an MC 330 or MC 331 cargo tank subject to paragraph (d)(10) of this section must make a written report concerning the cargo tank following the required inspection or test. This reporting requirement does not apply to a motor carrier leasing a cargo tank for less than 30 days if the lessor has submitted the reports required by this section. The report for each cargo tank must contain the following:

* * * * *

(13) *Report retention.* A copy of the report required by this section must be retained by the carrier at its principal place of business during the period the tank is in the carrier's service and for 1 year thereafter. However, upon a written request to, and with the approval of the Director, Regional Motor Carrier Safety Office, for the region in which a motor carrier has its principal place of business, the carrier may maintain the reports at a regional or terminal office.

* * * * *

§ 173.34 [Amended]

10. In § 173.34, paragraph (c)(4) is removed.

11. In § 173.53, the introductory text of paragraph (h) is revised to read as follows:

§ 173.53 Definition of class A explosives.

* * * * *

(h) *Type 8.* Any device or solid or liquid compound or mixture which is not specifically included in any of the above types, and which under special conditions may be so designated and examined by the Bureau of Explosives or the Bureau of Mines, U.S. Department of the Interior, and approved by the Associate Director for HMR. Example: Shaped charges, commercial.

* * * * *

12. In § 173.91, paragraph (a)(6) is revised to read as follows:

§ 173.91 Special fireworks.

(a) * * *

(6) Illuminating projectiles, incendiary projectiles, and smoke projectiles exceeding 90 pounds each, or of not less than 4½ inches in diameter, may be offered for transportation without being boxed, only by, for, or to the Department of Defense (DOD) of the U.S. Government when securely blocked and braced in accordance with methods prescribed by DOD.

(i) Illuminating projectiles, incendiary projectiles, and smoke projectiles less than 4½ inches in diameter may be offered for transportation without being boxed, when palletized, only by, for, or to the Department of Defense (DOD) of the U.S. Government when securely blocked and braced in accordance with methods prescribed by DOD.

* * * * *

13. In § 173.107, the heading and paragraph (h) are revised and paragraph (b) is removed and reserved to read as follows:

§ 173.107 Primers, percussion caps, and grenades, empty, primed.

* * * * *

(b) [Reserved]

* * * * *

(h) No restrictions other than proper shipping name, packaging and marking are prescribed in this subpart for the transportation of those materials named in paragraph (a) of this section.

14. In § 173.119, paragraphs (a)(18), (g) and (h) are removed and reserved; footnotes 3 and 4 in paragraph (a), and footnote 3 in paragraph (f) are removed; Note 3 following paragraph (f)(4) is revised; and paragraphs (a)(12), (a)(17), (e)(2), (e)(3), the introductory text of paragraph (f), and paragraphs (f)(3), (f)(4) and (f)(5) are revised to read as follows:

§ 173.119 Flammable liquids not specifically provided for.

(a) * * *

(12) Specification 103,[2] 103W, 103ALW, 103DW, 104,[2] 104W, 105A100,[2] 105A100ALW, 105A100W, 106A500X, 106A800XNC, 106A800NCI,[2] 109A100ALW, 109A300W, 110A500W, 111A60ALW1, 111A60F1, 111A60W1, 111A100W3, 111A100W4, 111A100W6, 112A200W, 112A400F, 114A340W, 115A60W1, 115A60ALW, or 115A60W6, (§§ 179.100, 179.101, 179.200, 179.201, 179.220, 179.300, 179.301 of this subchapter) tank cars. For cars equipped with expansion domes, manway closures must be so designed that pressure will be released automatically by starting the operation of removing the manway cover. Openings in tank heads to facilitate application of lining are authorized on tank cars constructed before January 1, 1975. These openings must be closed in an approved manner (§ 179.3 of this subchapter).

* * * * *

(17) Specification MC 300, MC 301, MC 302, MC 303, MC 304, MC 305, MC 306, MC 307, MC 310, MC 311, MC 312, MC 330 or MC 331 (§§ 178.340, 178.341, 178.342, 178.343, 178.337 of this subchapter) cargo tanks, subject to the following conditions:

(i) Bottom outlets on Specification MC 304, MC 310, MC 311 or MC 312 cargo tanks must conform to § 178.342–5(a). Bottom outlets on Specification MC 330 cargo tanks must be equipped with valves conforming to § 178.337–11(c).

(ii) Specification MC 319, MC 310 or MC 312, cargo tanks must be equipped with pressure relief devices conforming to § 178.342–4. Safety relief devices on Specification MC 330 cargo tanks must conform with § 178.337–9.

(iii) Necessary interior cleaning of cargo tanks must be performed between changes in lading.

(18) [Reserved]

* * * * *

(e) * * *

(2) Specification 103,[2] 103W, 103ALW, 103DW, 104,[2] 104W, 105A100,[2] 105A100ALW, 105A100W, 106A500X, 106A800XNC, 106A800NCI,[2] 109A100ALW, 109A300W, 110A500W, 111A60ALW1, 111A60F1, 111A60W1, 111A100W3, 111A100W4, 111A100W6, 112A200W, 112A400F, 114A340W, 115A60W1, 115A60W6, or 115A60ALW, (§§ 179.100, 179.101, 179.200, 179.201, 179.220, 179.221, 179.300, 179.301 of this subchapter) tank cars. Openings in tank heads to facilitate the application of linings are authorized on tank cars constructed before January 1, 1975. These openings must be closed in an approved manner (§ 179.3 of this subchapter).

(3) Specification MC 304, MC 307, MC 310, MC 311, MC 312, MC 330, or MC 331 (§§ 178.340, 178.342, 178.343, 178.337 of this subchapter) cargo tanks, subject to the following conditions:

(i) Bottom outlets on Specification MC 304, MC 310, MC 311 cargo tanks must conform to § 178.342–5. Bottom outlets on Specification MC 330 cargo tanks must be equipped with valves conforming to § 178.337–11(c).

(ii) MC 310, MC 311 or MC 312 cargo tanks must have a design pressure of at least 25 psig. These cargo tanks must be equipped with pressure relief devices conforming to § 178.342–4.

(iii) MC 330 cargo tanks must be equipped with pressure relief devices conforming to § 178.337–9.

(iv) Each safety relief device must be set to discharge at no less than 25 psig.

(v) Necessary interior cleaning of cargo tanks must be performed between changes in lading.

* * * * *

(f) *When the vapor pressure exceeds 27 pounds per square inch absolute at 100 °F.* When the vapor pressure exceeds 27 psia at 100 °F., but does not exceeds 40 psia (see note 1) at 100 °F., flammable liquids must be packed in specification containers as follows:

* * * * *

(3) Specification 105A100,[2] 105A100ALW, 105A100W, 106A500X, 106A800XNC, 106A800NCI,[2] 109A100ALW, 109A300W, 110A500W, 111A100W4, 112A200W, 112A400F, or 114A340W, §§ 179.100, 179.101, 179.200, 179.210 (179.300, 179.301 of this subchapter) tank cars. (See Note 1 of this paragraph.) Specification 104 [2], 104W, and 111A100W3 (§§ 179.200, 179.201 of this subchapter), tank cars are authorized under conditions prescribed in paragraph (f)(4), of this section and Note 2 of this paragraph. Openings in tank heads to facilitate the application of linings are authorized on tank cars constructed before January 1, 1975. These openings must be closed in an approved manner (§ 179.3 of this subchapter).

(4) Specification 103 [2], 103W, 103ALW, 104,[2], 104W, 111A60ALW1, 111A60F1, 111A60W1, 115A60W1, 115A60W6, or 115A60ALW (§§ 179.200, 179.201, 179.220, 179.221, of this subchapter) tank cars.

Note 3.—Spec. 104 [2] or 104–W tank cars are authorized provided they are equipped with approved fittings designed to provide for the loading, unloading, gauging, sampling, and taking temperature of the contents without removing the manway closure; that pressure relief valves are set to open at pressure of 35 pounds gauge (with a tolerance of plus or minus 3 pounds), and are vapor tight at 28 pounds per square inch gauge pressure; that bottom discharge outlets are of the same type as authorized for specification 104 [2] or 104–W tank cars; and that there is stenciled on each side of the tank above the specification mark, in letters and figures at least 1 inch high. "For vapor pressures not exceeding 40 pounds per square inch, absolute, at 100 °F." Specification ICC–104[2] or 104–W tank cars, equipped with pressure relief valves set to open at pressure of 35 pounds gauge (with a tolerance of plus or minus 3 pounds) and which are vapor tight at 28 pounds per square inch gauge pressure are authorized provided that they are stenciled as required above.

(5) Specification cargo tanks as prescribed in paragraph (e)(3) of this section.

* * * * *

(g) [Reserved]

(h) [Reserved]

* * * * *

15. In § 173.123, paragraph (a)(5) is revised to read as follows:

§ 173.123 Ethyl chloride.

(a) * * *

(5) Specification 105A100,[1] 105A100W, 111A100W4, 112A200W, 112A400F, or 114A340W (§§ 179.100, 179.101, 179.200, 179.201 of this subchapter) tank cars. Specification 114A340W tank cars must not be equipped with any bottom outlet. Bottom washout permitted. (See Note 1 following § 173.119(f)(3).) (See § 173.10 for shipping instructions.)

* * * * *

16. In § 173.124, paragraphs (a)(1) and (a)(2) are revised to read as follows:

§ 173.124 Ethylene oxide.

(a) * * *

(1) Specification 15A, 15B, 15C, 16A, or 19B (§§ 178.168, 178.169, 178.170, 178.185, 178.191 of this subchapter) wooden boxes and Spec. 12B (§ 178.205 of this subchapter) fiberboard boxes, with inside metal packaging not over 12-

ounce capacity each. Each inside packaging must have a minimum bursting strength of 180 psig as prepared for shipment and be provided with a safety vent having a minimum diameter of 0.1023 inch and closed with fusible metal having a yield temperature of 157° to 170 °F. The safety vent opening must be hot tinned before filling with fusible metal. Filling must be such that the container will not be liquid full below 185 °F. Each inside packaging must be completely insulated except for top closure. Not more than 12 inside packages nor more than one layer of packagings may be packed in one outside box.

(2) Cylinders as prescribed for any compressed gas, except acetylene, not exceeding 30 gallons nominal water capacity, which meet the following requirements: All cylinders must be seamless or steel welded. Cylinders must be equipped with safety devices of the fusible plug type with threaded straight bore orifice, with yield temperature of 157° to 170 °F., having a minimum vent area of 0.0055 square inch per pound of water capacity for packagings not over 1-gallon capacity and 0.0012 square inch per pound of water capacity for all packagings over 1-gallon capacity. Each cylinder must be tested for leakage at a pressure of at least 15 psig with an inert gas before each refilling. Fillings must be such that the packaging will not be liquid full at 185 °F. Pressurizing valves must be provided for all packaging over 1-gallon capacity. Eductor tubes must be provided for all packagings over 5-gallon capacity. Cylinders having a water capacity in excess of 1-gallon must be insulated.

* * * * *

17. In § 173.202, paragraph (a)(1) is revised to read as follows:

§ 173.202 Sodium metal liquid alloy, potassium metal liquid alloy, and sodium potassium liquid alloy.

(a) * * *

(1) Specification 15A, 15B, or 19B (§§ 178.168, 178.169, 178.191 of this subchapter) wooden boxes with inside metal packagings. Inside packagings must be cushioned with incombustible cushioning material. Each inside metal packaging must have been tested hydrostatically to a pressure of not less than 60 pounds per square inch without rupture. Closing devices on inside metal packagings must be protected from injury. Not more than 300 pounds of the material may be shipped in one outside box.

* * * * *

18. In § 173.206, paragraph (c)(2) is revised to read as follows:

§ 173.206 Sodium or potassium, metallic; sodium amide; sodium potassium alloys; sodium aluminum hydride; lithium metal; lithium silicon; lithium ferro silicon; lithium hydride; lithium borohydride; lithium aluminum hydride; lithium acetylide-ethylene diamine complex; aluminum hydride; cesium metal; rubidium metal; zirconium hydride; powdered.

* * * * *

(c) * * *

(2) Specifications 17C, 17H, 37A, or 37B (§§ 178.115, 178.118, 178.131, or § 178.132 of this subchapter) metal drums (single-trip). These drums are authorized for cylindrical blocks which must be at least 2 inches in diameter and not less than 6 inches in length, or rectangular blocks not less than 6 inches in length and not less than 2 inches in any other dimension.

* * * * *

§ 173.238 [Removed and reserved]

19. Section § 173.238, is removed and reserved.

20. In § 173.245, paragraph (a)(25) is revised to read as follows:

§ 173.245 Corrosive liquids not specifically provided for.

(a) * * *

(25) Specification 12A or 12B (§§ 178.210, 178.205 of this subchapter) fiberboard boxes with inside aluminum packagings which must be compatible with the lading.

* * * * *

21. In § 173.252, paragraph (g)(1) is revised to read as follows:

§ 173.252 Bromine.

* * * * *

(g) * * *

(1) Specification 5K (§ 178.88 of this subchapter) nickel drums, of not over 10 gallons capacity each, and containing not more than 225 pounds net weight of bromine, or Specification 5M (§ 178.90 of this subchapter) monel drums, of not over 25 gallons capacity each, and containing not more than 600 pounds net weight of bromine. Drums must be at least 14-gauge throughout and must have chime reinforcement adequate for their protection. All openings must be in one head and the closing parts (plug, cap, flange, etc.) must be of the same metal as the drum. One opening not over 2.3 inches in diameter and one opening not over ¾-inch standard pipe size are permitted. Each drum must be completely emptied and dried before reuse.

* * * * *

22. In § 173.256, paragraph (a)(3) is revised to read as follows:

§ 173.256 Compounds, cleaning, liquid.

(a) * * *

(3) Specification 22B (§ 178.197 of this subchapter) plywood drums equipped with a liner of rubber, polyethylene or other material impervious to the solution.

* * * * *

23. In § 173.263, paragraph (a)(9) is revised to read as follows:

§ 173.263 Hydrochloric (muriatic) acid; hydrochloric (muriatic) acid mixtures; hydrochloric (muriatic) acid solution, inhibited; sodium chlorite solution (not exceeding 42 percent sodium chlorite) and cleaning compounds, liquids, containing hydrochloric (muriatic) acid.

(a) * * *

(9) Specification 103B,[1] 103BW, or 111A60W5 (§§ 179.200, 179.201 of this subchapter) tank cars. These cars are authorized for acid not over 38 percent strength by weight. A safety relief valve or a safety vent of approved design equipped with frangible disc having ⅛-inch breather hole in center thereof or a safety vent of approved design equipped with carbon discs permitting continuous venting may be used, but may not be used for hydrochloric (muriatic) acid of 22° Baume strength or greater, and other fuming acids.

* * * * *

§ 173.265 [Amended]

24. In § 173.265 in the heading and in paragraphs (a), (b), (c), and (d) the words "Hydrofluorosilicic acid" are revised to read "Fluosilicic acid (hydrofluorosilicic acid) (hydrofluosilicic acid)".

25. In § 173.289, paragraph (a)(2)(i) is revised to read as follows:

§ 173.289 Formic acid and formic acid solutions.

(a)* * *

(2)* * *

(i) Each tank car authorized under this section must be marked "FORMIC ACID" in accordance with the requirements in § 172.330 of this subchapter.

* * * * *

26. In § 173.314, the Table following paragraph (c) is amended by revising the entry "Chlorotrifluoromethane (R–13) and Note 12 following the Table to read as follows:

§ 173.314 Requirements for compressed gases in tank cars.

* * * * *

(c)* * *

[1] The use of existing tanks authorized but new construction not authorized.

King of gas	Maximum permitted filling density, Note 1	Required tank car, see § 173.31(a)(2) and (3)
Revised		
Chlorotrifluoro-methane (R-13); Note 13.	Note 21.....	DOT-105A300W, DOT-114A340W, Note 29.

NOTE 12.—For special tank requirements applying to chlorine, see § 179.102-2 of this subchapter. The quantity of chlorine loaded into a single-unit tank car must not exceed 90 tons. Nominal 16- , 30- , 55- , 85- or 90-ton tank car tanks must not be loaded in excess of the normal lading weights. Tank cars built to ICC-105A500 may be stenciled either ICC-105A300 or ICC-105A500; tank cars built to ICC or DOT 105A500W may be stenciled either 105A300W or 105A500W; each tank must be equipped with safety relief valve required by the stenciled specification. Cars not larger than 55-ton chlorine capacity built to ICC-105A300, or ICC-105A300W may be continued in service if equipped with excess flow valves in accordance with § 179.102-2. DOT-105A cars having forge welded anchors must not be used for transportation of chlorine.

* * * * *

27. In § 173.315, the heading of the Table in paragraph (b) is amended by adding "See Note 1" to the second column; the last column of the Table is removed and Note 1 following the Table is revised as follows:

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

* * * * *

(b)* * *

Maximum specific gravity of the liquid material at 60 °F.	Maximum permitted filling density in percent of the water-weight capacity of the tanks (percent) See Note 1	
	1,200 gallons or less	Over 1,200 gallons

NOTE 1.—Filling is permitted by volume provided the same filling density is used as permitted by weight, except when using fixed length dip tube or other fixed maximum liquid level indicators (paragraph (f) of this section), in which case the maximum permitted filling density shall not exceed 97 percent of the maximum permitted filling density by weight contained in the table.

* * * * *

28. In § 173.354, paragraph (a)(5) is revised and paragraph (a)(6) is amended by adding a sentence at the end to read as follows:

§ 173.354 Motor fuel antiknock compound or tetraethyl lead.

(a)* * *

(5) Specification MC 330 or MC 331 (§ 178.337 of this subchapter) cargo tanks. (See Note 1). These cargo tanks are authorized for motor fuel antiknock compound only. A frangible disc may be used in series with and inboard of the pressure relief valve. The relief valve and the frangible disc must be set to function in a range of no less than 100 percent and no greater than 110 percent of the maximum allowable working pressure.

(6)* * * A frangible disc may be used in series with and inboard of the pressure relief valve. The relief valve and the frangible disc must be set to function in a range of no less than 100 percent and no greater than 110 percent of the maximum allowable working pressure.

* * * * *

§ 173.417 [Amended]

29. In § 173.417, paragraph (a)(6)(v) is amended by removing the reference "§ 173.350" and inserting, in its place, the reference "§ 178.350".

§ 173.433 [Amended]

30. In § 173.433, Table 9 is amended by removing the title "Table 9—A_3 for Alpha Emitters" and inserting, in its place, the title "Table 9—A_3 Values".

31. In § 173.860, paragraph (c)(5) is added to read as follows:

§ 173.860 Mercury, metallic.

* * * * *

(c)* * *

(5) In manufacturer's original packaging if each item does not contain more than 100 milligrams of mercury per tube and if the outside package does not contain more than one gram total net quantity. Packages conforming to these quantity limitations are not subject to any other requirements of this subchapter.

PART 174—CARRIAGE BY RAIL

32. In § 174.104, paragraphs (a) and (b)(6) are revised to read as follows:

§ 174.104 Class A explosives; car selection, preparation, inspection, and certification.

(a) Except as provided in § 174.101 (b), (n), and (o), Class A explosives being transported by rail may be transported only in a certified and properly placarded closed car of not less than 80,000 pounds capacity, with steel underframes and friction draft gear or cushioned underframe, except that on a narrow-gauge railroad they may be transported in a car of less capacity as long as the car of greatest capacity and strength available is used.

(b) * * *

(6) The car must be carefully swept out before it is loaded. For less-than-carload shipments the space in which the packages are to be loaded must be carefully swept. If evidence of a potential hazardous residue is apparent after the floor has been swept, the carrier must either decontaminate the car or provide a suitable substitute car.

* * * * *

PART 176—CARRIAGE BY VESSEL

§§ 176.76, 176.78, 176.135, 176.150, 176.163 and 176.340 [Amended]

33. In §§ 176.76(a), 176.78(d), 176.135(d), 176.150(b), 176.163(c) and 176.340(a)(3) the codes "GMHM", or "G-MHM" are amended to read "G-MTH".

34. In § 176.305, paragraph (c)(5) is revised to read as follows:

§ 176.305 General stowage requirements.

* * * * *

(c) * * *

(5) Flammable liquids in excess of one ton, except flammable liquids with a flashpoint above 73 °F., may not be transported in any hold or compartment that is fitted with a gooseneck type of vent head.

* * * * *

PART 177—CARRIAGE BY PUBLIC HIGHWAY

35. In § 177.817, paragraphs (a) and (d) are revised to read as follows:

§ 177.817 Shipping papers.

(a) *General requirements.* A carrier may not transport a hazardous material unless it is accompanied by a shipping paper that is prepared in accordance with §§ 172.200, 172.201, 172.202, and 172.203 of this subchapter.

* * * * *

(d) This section does not apply to any material, other than a hazardous substance or a hazardous waste, that is classed as an ORM-A, B, C or D. (See § 172.200 of this subchapter.)

* * * * *

PART 178—SHIPPING CONTAINER SPECIFICATIONS

36. In § 178.24, § 178.24-7 the introductory text of paragraph (a) is revised to read as follows:

§ 178.24 Specification 2U; molded or thermoformed polyethylene containers.

§ 178.24-7 Tests.

(a) Samples taken at random must withstand prescribed tests without breakage or leakage. Tests must be made on each type and size produced at each manufacturing location starting production and repeated each four months. Testing may be performed at a location other than the manufacturing location. The type of tests are as follows:

* * * * *

37. In § 178.27, § 178.27-3 the introductory text of paragraph (a) is revised to read as follows:

§ 178.27 Specification 2TL; polyethylene container.

§ 178.27-3 Type test.

(a) Samples taken at random must withstand prescribed tests without breakage or leakage. Tests must be made on each type and size produced at each manufacturing location starting production and repeated each four months. Testing may be performed at a location other than the manufacturing location. The type of tests are as follows:

* * * * *

38. In § 178.35a, § 178.35a-3 the introductory text of paragraph (a) is revised to read as follows:

§ 178.35a Specification 2SL; molded or thermoformed polyethylene container.

§ 178.35a-3 Type test.

(a) Samples taken at random must withstand prescribed tests without breakage or leakage. Test must be made on each type and size produced at each manufacturing location starting production and repeated each four months. Testing may be performed at a location other than the manufacturing location. The type of tests are as follows:

* * * * *

39. In § 178.37, § 178.37-5 paragraph (a) is amended by revising Note 1 following the first table and adding a Note 2 to read as follows: Note 2 following the second table is removed.

§ 178.37 Specification 3AA; seamless steel cylinders made of definitely prescribed steels or 3AAX; seamless steel cylinders made of definitely prescribed steels of capacity over 1,000 pounds water volume.

§ 178.37-5 Authorized steel.

(a) * * *

Note 1.—A heat of steel made under the above specifications, check chemical analysis of which is slightly out of the specified range, is acceptable, if satisfactory in all other respects, provided the tolerances shown in the following tables are not exceeded.

Note 2.—This designation shall not be restrictive and the commerical steel is limited in analysis as shown in the table.

* * * * *

40. In § 178.44, § 178.44-5, paragraph (a) is amended by revising Note 1 following the table to read as follows:

§ 178.44 Specification 3HT; inside containers, seamless steel cylinders for aircraft use made of definitely prescribed steel.

§ 178.44-5 Authorized steel.

(a) * * *

Note 1.—A heat of steel made under the specifications listed in the first table, check chemical analysis of which is slightly out of the specified range, is acceptable, if satisfactory in all other respects, provided the tolerances shown in the second table are not exceeded.

* * * * *

41. In § 178.46, § 178.46-4 paragraph (d)(12) and § 178.46-8, paragraphs (e)(2) and (e)(3) are revised to read as follows:

§ 178.46 Specification 3AL; seamless cylinders made of definitely prescribed aluminum alloys.

§ 178.46-4 Duties of the Inspector.

* * * * *

(d) * * *

(12) Furnishing complete test reports required by this specification to the maker of the cylinder and, upon request, to the purchaser. The test report must be retained by the Inspector for fifteen years from the original test date of the cylinder.

* * * * *

§ 178.46-8 Openings.

* * * * *

(e) * * *

(2) Taper threads, when used, must be either the American Standard Pipe Thread (NPT) type conforming with Federal Standard H-28 (1978), Section 7, or the National Gas Taper Thread (NGT) type conforming with Federal Standard H-28 (1978), Section 7 and 9.

(3) Straight threads, when used, must conform with Federal Standard H-28 (1978) as follows:

(i) National Gas Straight Thread (NGS) type must conform with Sections 7 and 9.

(ii) Unified Thread (UN) type must conform with Section 2.

(iii) Controlled Radius Root Thread (UNJ) type must conform with Section 4.

* * * * *

42. In § 178.47, § 178.47-8 paragraph (a) is revised to read as follows:

§ 178.47 Specification 4DS; inside containers, welded stainless steel for aircraft use.

§ 178.47-8 Manufacture.

(a) By best appliances and methods; dirt and scale to be removed as necessary to afford proper inspection; no defect is acceptable that is likely to weaken the finished cylinder appreciably, reasonably smooth and uniform surface finish required. No abrupt change in wall thickness is permitted. Welding procedures and operators must be qualified in accordance with of CGA Pamphlet C-3.

* * * * *

43. In § 178.50, § 178.50-8 paragraph (b) is added to read as follows:

§ 178.50 Specification 4B; welded and brazed steel cylinders.

§ 178.50-8 Manufacture.

* * * * *

(b) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C-3.

44. In § 178.51, § 178.51-8 paragraph (d) is added to read as follows:

§ 178.51 Specification 4BA; welded or brazed steel cylinders made of definitely prescribed steels.

§ 178.51-8 Manufacture.

* * * * *

(d) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C-3.

45. In § 178.53, § 178.53-8 paragraph (b) is added to read as follows:

Section 178.53 *Specification 4D; inside containers, welded steel for aircraft use.*

Section 178.53-8 *Manufacture.*

* * * * *

(b) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C-3.

46. In § 178.54, § 178.54-8 paragraph (a)(2) is revised to read as follows:

§ 178.54 Specification 4B240-FLW; welded or welded and brazed cylinders with fusion-welded longitudinal seam.

§ 178.54-8 Manufacture.

(a) * * *

(2) Longitudinal seams shall be fusion butt welded. This seam shall be double butt welded unless means are provided for accomplishing complete penetration from one side, in which case a butt weld from one side may be used. Welding procedures and operators must be qualified in accordance with CGA Pamphlet C-3.

47. In § 178.55, § 178.55-8, paragraph (d) is added to read as follows:

§ 178.55 Specification 4B240ET; welded and brazed cylinders made from electric resistance welded tubing.

§ 178.55-8 Manufacture.

* * * * *

(d) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C-3.

48. In § 178.56, § 178.56-8 paragraph (d) is added to read as follows:

§ 178.56 Specification 4AA480; welded steel cylinders made of definitely prescribed steels.

§ 178.56-8 Manufacture.

* * * * *

(d) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C-3.

49. In § 178.57, § 178.57–8 paragraph (e) is added and in § 178.57–10 paragraph (a)(5) is revised to read as follows:

§ 178.57 Specification 4L; welded cylinders, insulated.

§ 178.57–8 Manufacture.

* * * * *

(e) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C–3. In addition, impact test of the weld shall be performed in accordance with § 178.57–17(d) as part of the qualification of each welding procedure and operator.

§ 178.57–10 Wall thickness.

(a) * * *

(5) Further provided that wall stress for cylinders having longitudinal seams must not exceed 85 percent of the above value, whichever applies.

* * * * *

50. In § 178.58, § 178.58–8 paragraph (a) is revised to read as follows:

§ 178.58 Specification 4DA; inside containers, welded steel for aircraft use.

§ 178.58–8 Manufacture.

(a) By best appliances and methods; dirt and scale to be removed as necessary to afford proper inspection; no defect is acceptable that is likely to weaken the finished container appreciably. A reasonably smooth and uniform surface finish is required. No abrupt change in wall thickness is permitted. Welding procedures and operators must be qualified in accordance with CGA Pamphlet C–3.

* * * * *

51. In § 178.59, § 178.59–7 paragraph (b) is added to read as follows:

§ 178.59 Specification 8; steel cylinders with approved porous filling for acetylene.

§ 178.59–7 Manufacture.

* * * * *

(d) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C–3.

52. In § 178.60, § 178.60–7 paragraph (b) is added to read as follows:

§ 178.60 Specification 8AL; steel cylinders with approved porous filling for acetylene.

§ 178.60–7 Manufacture.

* * * * *

(b) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C–3.

53. In § 178.61, § 178.61–8 paragraph (d) is revised and in § 178.61–15 paragraph (a) is revised to read as follows:

§ 178.61 Specification 4BW; welded steel cylinders made of definitely prescribed steels with electric-arc welded longitudinal seam.

§ 178.61–8 Manufacture.

* * * * *

(d) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C–3.

* * * * *

§ 178.61–15 Physical tests.

(a) Specimens must be taken from one cylinder after heat treatment and chosen at random from each lot of 200 or less, as follows:

(1) *Body specimen.* One specimen must be taken longitudinally from the body section at least 90 degrees away from the weld.

(2) *Head specimen.* One specimen must be taken from either head on a cylinder when both heads are made of the same material; however—

(i) If the two heads are made of differing materials, a specimen shall be taken from each head; and

(ii) If due to welded attachments on the top head there is insufficient surface from which to take a specimen, it may be taken from a representative head of the same heat treatment as the test cylinder.

* * * * *

54. In § 178.65, § 178.65–5 paragraph (b) is revised and in 178.65–6 paragraph (d) is added to read as follows:

§ 178.65 Specification 39; non-reusable (non-refillable) cylinder.

§ 178.65–5 Material; steel or aluminum.

* * * * *

(b) Aluminum: Aluminum is not authorized for service pressures in excess of 500 p.s.i.g. The analysis of the aluminum must conform to the Aluminum Association standard for alloys 1060, 1100, 1170, 3003, 5052, 5086, 5154, 6061, and 6063 as specified in its publication entitled "Aluminum Standards and Data" (7th edition dated June 1982).

* * * * *

§ 178.65–6 Manufacture.

* * * * *

(d) Welding procedures and operators must be qualified in accordance with CGA Pamphlet C–3.

55. In § 178.80, § 178.80–11 is revised, § 178.80–12 is removed and reserved and in § 178.80–13 the introductory text is revised to read as follows:

§ 178.80 Specification 5; steel barrels or drums.

§ 178.80–11 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached by drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–5.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (For example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minumum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.80–12 [Reserved]

§ 178.80–13 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

56. In § 178.81, § 178.81–11 is revised, § 178–81–12 is removed and reserved, and the introductory text of paragraph

(a) of § 178.81–13 is revised to read as follows:

§ 178.81 Specification 5A; steel barrels or drums.

§ 178.81–11 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows

(1) DOT–5A.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (for example, 18/16–55–83 for body 18 gauge and head 16 gauge.)

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.81–12 [Reserved]

§ 178.81–13 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

57. In § 178.82, § 178.82–11 is revised, § 178.82–12 is removed and reserved, and the introductory text of paragraph(a) of § 178.82–13 is revised to read as follows:

§ 178.82 Specification 5B; steel barrels or drums.

§ 178.82–11 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–5B.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name of symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When—the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.82–12 [Reserved]

§ 178.82–13 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

58. In § 178.83, § 178.83–11 is revised, § 178.83–12 is removed and reserved, and the introductory text of paragraph (a) of § 178.83–13 is revised to read as follows:

§ 178.83 Specification 5C; steel barrels or drums.

§ 178.83–11 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–5C.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.83–12 [Reserved]

§ 178.83–13 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The test must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or

for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

59. In § 178.88, § 178.88–10 is revised, § 178.8–11 is removed and the introductory text of paragraph (a) of § 78.88–12 is revised to read as follows:

§ 178.88 Specification 5K; nickel barrels or drums.

§ 178.88–10 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring or drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–5K.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letter HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.88–11 [Reserved]

§ 178.88–12 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The test must be repeated every 12 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 2 years, whichever period is shorter. The type tests are as follows:

* * * * *

60. In § 178.89, § 178.89–9 is revised, § 178.89–10 is removed and reserved, and the introductory text of paragraph (a) of § 178.89–11 is revised to read as follows:

§ 178.89 Specification 5L steel barrels or drums.

§ 178.89–9 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–5L.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets are identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.89–10 [Reserved]

§ 178.89–11 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

61. In § 178.90, § 178.90–10 is revised, § 178.90–11 is removed and reserved, and the introductory text of paragraph (a) of § 178.90–12 is revised to read as follows:

§ 178.90 Specification 5M; monel drums.

§ 178.90–10 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–5M.

(2) Name or symbol of person making the mark specificed in paragraph (a)(1) of this section. A symbol, if used must be registered with the Associate Director for HMR.

(3) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 guage).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.90–11 [Reserved]

§ 178.90–12 Type tests.

(a) Samples taken a random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 12 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

62. In § 178.92, § 178.92–12 is revised and the introductory text of paragraph (a) of § 178.92–13 is revised to read as follows:

§ 178.92 Specification 5P; lagged steel drums.

§ 178.92-19 Marking.

(a) Each drum must be marked by embossing on a permanent head or on a permanently attached head protection ring) with clearly legible raised characters as follows:

(1) DOT-5P.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designated on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18-55-83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16-55-83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.92-13 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 12 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

63. In § 178.98, § 178.98-9 is revised, § 178.98-10 is removed and reserved, and the introductory text of paragraph (a) of § 178.98-11 is revised to read as follows:

§ 178.98 Specification 6B; steel barrels or drums.

§ 178.98-9 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT-6B.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18-55-83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16-55-83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.98-10 [Reserved]

§ 178.98-11 Type tests.

(a) Samples taken at random and closed as for use shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

64. In § 178.99, § 178.99-9 is revised, § 178.99-10 is removed and reserved, and the introductory text of paragraph (a) of § 178.99-11 is revised to read as follows:

§ 178.99 Specification 6C; steel barrels or drums.

§ 178.99-9 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT-6C.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18-55-83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16-55-83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.99-10 [Reserved]

§ 178.99-11 Type test.

(a) Samples taken at random and closed as for use, shall withstand the prescribed test without leakage. Each packaging design type must successfully pass the test before the packaging is used. The tests must be repeated every 4 months. a packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year whichever period is shorter. The type test are as follows:

* * * * *

65. In § 178.100, § 178.100-9 is revised, § 178.100-10 is removed and reserved, and the introductory text of paragraph

(a) of § 178.100–11 is revised to read as follows:

§ 178.100 Specification 6J; steel barrels or drums.

§ 178.100–9 Marking.

(a) Each barrel or drum must be marked by embossing on a permanent head (or by embossing or die stamping of footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–6J.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.100–10 [Reserved]

§ 178.100–11 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

66. In § 178.102, § 178.102–4 is revised to read as follows:

§ 178.102 Specification 6D; cylindrical steel overpack, straight sided, for inside plastic container.

§ 178.102–4 Marking.

(a) Each steel overpack must be marked by embossing on a permanent head with clearly legible raised characters as follows:

(1) DOT–6D.

(2) If the steel overpack is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge to the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is revised.

67. In § 178.107, § 178.107–9 is revised, § 178.107–10 is removed, and reserved and the introductory text of paragraph (a) of § 178.107–11 is revised to read as follows:

§ 178.107 Specification 42B; aluminum drums.

§ 178.107–9 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–42B.

(2) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(3) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.107–10 [Reserved]

§ 178.107–11 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

68. In § 178.109, § 178.109 is revised, § 178.109–10 is removed and reserved, and the introductory text of paragraph (a) of § 178.109–11 is revised to read as follows:

§ 178.109 Specification 42D; aluminum drums.

§ 178.109–9 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–42D.

(2) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(3) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.109-10 [Reserved]

§ 178.109-11 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year whichever period is shorter. The type tests are as follows:

* * * * *

69. In § 178.115, § 178.115-10 is revised, § 178.115-11 is removed and reserved, and the introductory text of paragraph (a) of § 178.115-12 is revised to read as follows:

§ 178.115 Specification 17C; steel drums.

§ 178.115-10 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footrings on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT-17C and the letters STC located near the DOT mark to indicate a single-trip drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18-55-83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16-55-83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.115-11 [Reserved]

§ 178.115-12 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

70. In § 178.116, § 178.116-10 is revised, § 178.115-16 is removed and reserved, and the introductory text of paragraph (a) of § 178.116-12 is revised to read as follows:

§ 178.116 Specification 17E; steel drums.

§ 178.116-10 Marking

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT-17E and the letters STC located near the DOT mark to indicate a single-trip drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designating on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18-55-83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (for example, 18/16-55-83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.116-11 [Reserved]

§ 178.116-12 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

71. In § 178.117, § 178.117-9 paragraph (e) is added, § 178.117-11 is revised, § 178.117-12 is removed and reserved, and the introductory text of paragraph (a) of § 178.117-13 is revised to read as follows:

§ 178.117 Specification 17F; steel drums.

§ 178-117-9 Closures.

* * * * *

(e) Other types of closures are authorized if they perform without failure under the tests required by this section and a record of the tests is retained during the period the closure is in use.

§ 178.117-11 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT-17F and the letters STC located near the DOT mark to indicate a single-trip drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example. 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.117–12 [Reserved]

§ 178.117–13 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

72. In § 178.118, in § 178.118–10, paragraphs (a)(1) through (a)(3) are revised and (a)(4) and (b) are added, § 178.118–11 is removed and reserved, and the introductory text of paragraph (a) of § 178.118–12 is revised to read as follows:

§ 178.118 Specification 17H; steel drums.

§ 178.118–10 Marking.

(a) * * *

(1) DOT–17H and the letters STC located near the DOT mark to indicate a single-trip drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.118–11 [Reserved]

§ 178.118–12 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

73. In § 178.130, in § 178.130–8 is revised, § 178.130–9 is removed and reserved, and the introductory text of paragraph (a) of § 178.130–10 is revised to read as follows:

§ 178.130 Specification 37K; steel drums.

§ 178.130–8 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring or drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–37K and the letters STC located near the DOT mark to indicate a single-trip drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.130–9 [Reserved]

§ 178.130–10 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

74. In § 178.131, § 178.131–9 is revised, § 178.131–10 is removed and reserved, and the introductory text of paragraph (a) of § 178.131–11 is revised to read as follows:

§ 178.131 Specification 37A; steel drums.

§ 178.131–9 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–37A and the letters STC located near the DOT mark to indicate a single-trip drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during

manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol or person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§178.131–10 [Reserved]

§ 178.131–11 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

75. In § 178.132, § 178.132–9 is revised, § 178.132–10 is removed and reserved, and the introductory text of paragraph (a) of § 178.132–11 is revised to read as follows:

§ 178.132 Specification 37B; steel drums.

§ 178.132–9 Marking.

(a) Each drum must be marked by embossing on a permanent head (or by embossing or die stamping on footring on drums equipped with footrings, or on metal plates securely attached to drum by brazing or welding not less than 20 percent of the perimeter of the plate) with clearly legible raised characters as follows:

(1) DOT–37B and the letters STC located near the DOT mark to indicate a single-trip drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge.)

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.132–10 [Reserved]

§ 178.132–11 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are follows:

* * * * *

76. In § 178.133, § 178.133–9 is revised, § 178.133–10 is removed and reserved, and the introductory text of paragraph (a) of § 178.133–11 is revised to read as follows:

§ 178.133 Specification 37P; steel drums with polyethylene liner.

§ 178.133–9 Marking.

(a) Each drum must be marked by embossing on a permanent head with clearly legible raised characters as follows:

(1) DOT–37P and the letters NRC located near the DOT mark to indicate a nonreusable drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letter HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first. (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.133–10 [Reserved]

§ 178.133–11 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used.The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

77. In § 178.134, § 178.134–2 the introductory text of paragraph (c) is revised and § 178.134–134–4 is revised to read as follows:

§ 178.134 Specification 37M; cylindrical steel overpack, straight sided for inside plastic container; nonreusable containers.

§ 178.134–2 Construction requirements.

* * * * *

(c) Two holes not exceeding ¼ inch each are permitted diametrically opposite each other in the overpack body immediately below the top chime or immediately above the double seam of the bottom chime or three holes not exceeding 9/16 inch in a diameter on centers 120 degrees apart in the bottom head.

* * * * *

§ 178.134–4 Marking.

(a) Each steel overpack must be marked by embossing on a permanent

head with clearly legible raised characters as follows:

(1) DOT–37M and the letters NRC located near the DOT mark to indicate a nonreusable overpack.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letter HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the guage of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

78. In § 178.135, § 178.135–8 is revised, § 178.135–9 is removed and reserved, and the introductory text of paragraph (a) of § 178.135–10 is revised to read as follows:

§ 178.135 Specification 37C; steel drum.

§ 178.135–8 Marking.

(a) Each drum must be marked by embossing on a permanent head with clearly legible raised characters as follows:

(1) DOT–37C and the letters NRC located near the DOT mark to indicate a nonreusable drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.135–9 [Reserved]

§ 178.135–10 Type tests.

(a) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter The type tests are as follows:

* * * * *

79. In § 178.137, §178.137–6 is revised and in § 178.137–7, paragraph (a) is removed and reserved and the introductory text of paragraph (b) is revised to read as follows:

§ 178.137 Specification 37D; steel drum. Nonreusable container. Open-head not authorized.

§ 178.137–6 Marking.

(a) Each drum must be marked by embossing on a permanent head with clearly legible raised characters as follows:

(1) DOT–37D and the letters NRC located near the DOT mark to indicate a nonreusable drum.

(2) If the drum is manufactured of stainless steel, the type of steel used in the body and head sheets as identified by the American Iron and Steel Institute type number, and also the letters HT following the steel designation on barrels or drums subjected to stress relieving or heat treatment during manufacture (for example, 304, 316, 304 HT). This mark should be near the DOT mark.

(3) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(4) The gauge of the metal in the thinnest part, the rated capacity in gallons, and the year of manufacture (for example, 18–55–83). When the gauge of the metal in the body differs from that in the heads, both must be indicated with a slanting line between them and with the gauge of the body indicated first (for example, 18/16–55–83 for body 18 gauge and head 16 gauge).

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.137–7 Type tests.

(a) [Reserved]

(b) Samples taken at random and closed as for use, shall withstand the prescribed tests without leakage. Each packaging design type must successfully pass the tests before the packaging is used. The tests must be repeated every 4 months. A packaging design type is defined by the design, size, material, thickness, and manner of construction, but may include various surface treatments. A type may also include packagings which differ from the design type only in their lesser design heights. The samples last tested must be retained until further tests are made, or for 1 year, whichever period is shorter. The type tests are as follows:

* * * * *

80. In § 178.140, § 178.140–6 is revised and § 178.140–7 is removed and reserved to read as follows:

§ 178.140 Specification 13; metal kegs.

§ 178.140–6 Marking.

(a) Each metal keg must be marked by embossing on a permanent head with clearly legible raised characters as follows:

(1)DOT–13.

(2) Name or symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be registered with the Associate Director for HMR.

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

§ 178.140–7 [Reserved]

81. In § 178.141, § 178.141–7 is revised to read as follows:

§ 178.141 Specification 13A; metal drums.

§ 178.141–7 Marking.

(a) Each drum must be marked by embossing on a permanent head with clearly legible raised characters as follows:

(1) DOT–13A.

(2) Name of symbol of person making the mark specified in paragraph (a)(1) of this section. A symbol, if used, must be

registered with the Associate Director for HMR.

(b) For the purpose of this subchapter, the minimum character size specified in § 173.24(c)(1)(iv) is waived.

82. In § 178.251, § 178.251–3 paragraph (d) is revised to read as follows:

§ 178.251 General design and construction requirements applicable to specification 56 (§ 178.252) and 57 portable tanks (§ 178.253).

§ 178.251–3 General construction requirements.

* * * * *

(d) *Compliance test.* Compliance with the requirements contained in paragraph (b) or (c) of this section for the welded joints must be determined by preparing two test specimens from materials and fabrication techniques representative of those to be used in each tank. Each specimen must be tested to failure under tension. Each test speciment must be prepared and tested in accordance with ASTM Standard E8–81 for metallic materials and ASTM Standard B557–81 for aluminum and magnesium-alloy products. As a minimum, one pair of representative test specimens, consisting of the minimum and maximum thickness for each type of material used, may represent all the related tanks manufactured in the same shop within 12 months after the tests on the samples have been successfully completed. The butt welded specimens tested may be considered as qualifying other types or combinations of types of welds using the same filler material and welding process as long as parent metals are the same.

83. In § 178.255, § 178.255–8 paragraph (a) is revised and in § 178.255–15 the introductory text of paragraph (a) is revised to read as follows:

§ 178.255 Specification 60; steel portable tanks

§ 178.255–8 Safety devices.

(a) See § 173.315(i) of this subchapter.

* * * * *

§ 178.255–15 Report.

(a) A copy of the manufacturer's data report required by the Code (See § 178.245–1(a)) under which the tank is fabricated must be furnished to the owner for each new tank.

* * * * *

84. In § 178.337, § 178.337–17 the first sentence in paragraph (a) is revised to read as follows:

§ 178.337 Specification MC 331; cargo tanks constructed of steel, primarily for transportation of compressed gases as defined in the Compressed Gas Section

§ 178.333–17 Marking.

(a) *Metal identification plate.* Each tank shall have a noncorrosive metal plate permanently affixed by brazing or welding around its perimeter, on the left side near the front, in a place readily accessible for inspection and maintained legible. * * *

* * * * *

85. In § 178.338, § 178.338–18, the first sentence in paragraph (a) and (b) are revised to read as follows:

§ 178.338 Specfication MC 338; insulated cargo tank.

§ 178.338–18 Marking.

(a) *Nameplate.* On the left side near the front of each tank a corrosion resistant metal nameplate must be permanently affixed by brazing or welding around its perimeter. * * *

* * * * *

(b) *Specification plate.* An additional plate, in the form specified in paragraph (a) of this section, must be welded, brazed, or riveted to the jacket on the left side near the front, or at the control station, in a position readily legible to operating personnel. * * *

* * * * *

86. § 178.340, § 178.340–10 the second sentence in paragraph (b) is revised read as follows:

§ 178.340 General design and construction requirements applicable to specifications MC 306 (§ 178.341), MC 307 (§ 178.342) and MC 312 (§ 178.343) cargo tanks.

§ 178.340–10 Certification.

* * * * *

(b) *Metal certification plate.* * * * The metal certification plate, not subject to corrosion, must be located on the left side, near the front, in a place readily accessible for inspection. * * *

* * * * *

87. In § 179.200, § 179.200–15 paragraph (a) is revised to read as follows:

§ 179.200 General specifications applicable to non-pressure tank car tanks (classes DOT–103, 104, and 111).

§ 179.200–15 Closures for manways.

(a) Manway covers must be of approved type.

* * * * *

§ 179.201–1 [Amended]

88. In § 179.201, the Table in § 179.201–1 is amended by removing the reference to 179.202–1 for DOT Specification 103ALW, 103DW, 103W, 104W, 111A60ALW1, 111A100W1,[1] 111A100W3, 111A100W4 and 111A100W6; for specifications 103BW, 111A60W5 and 111A100W5 on the line entry "Safety relief devices (see § 179.200–18)" the word "vent" is changed to read "valve or vent".

89. In § 179.202, § 179.202–1 is revised to read as follows:

§ 179.202 Special commodity requirements for non-pressure tank car tanks.

§ 179.202–1 Flammable liquids not specifically provided for.

Tank cars used to transport flammable liquids not specifically provided for must have manway closures so designed that pressure will be released automatically by starting the operation of removing the manway cover.

* * * * *

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53. App. A to Part 1)

Issued in Washington, D.C., on February 28, 1985.

L.D. Santman,

Director, Materials Transportation Bureau

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