U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W
Washington, D.C. 20590

DOT-E 10211 (EXTENSION)
FIRST REVISION March 13, 1991

In accordance with 49 CFR 107.105 of the Department of Transportation (DOT) Hazardous Materials Regulations DOT-E 10211 is hereby extended for the party(ies) listed below by changing the expiration date in paragraph 10 to March 31, 1998. This change is effective from the issue date of this extension. All other terms of the exemption remain unchanged.

This extension applies only to party(ies) listed below based on the application(s) received in accordance with 49 CFR 107.105. This extension constitutes a necessary part of this exemption and must be attached to it.

for Marilyn E. Morris

Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

MAY 2 1996
(DATE)

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EXEMPTION HOLDER	APPLICATION DATE
CP Industries, Inc. McKeesport, PA	April 10, 1996

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400 Seventh Street, S.W.
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DOT-E 10211
(FIRST REVISION)

1. CP Industries, Inc. (CPI), McKeesport, Pennsylvania is hereby granted an exemption from certain provisions of this Department's Hazardous Materials Regulations to manufacture, mark, and sell the packaging described in paragraph 7 below for use in the transportation of certain flammable gases, and nonflammable gases described in paragraph 3 below in commerce subject to the requirements specified herein. This exemption authorizes the use of DOT Specification 3AX and 3AAX cylinders, with certain dimensional restrictions, that are qualified by means other than the requirements in 49 CFR §§ 178.36-15, 178.36-16(a), 178.37-15, and 178.37-16(a). This exemption provides no relief from any regulation other than as specifically stated.

2. BASIS. This exemption is based on the application of CP Industries dated June 7, 1989, and subsequent letters dated October 23, 1989, November 28, 1989, submitted in accordance with 49 CFR 107.103, and the public proceeding thereon and supplemental letter dated November 14, 1990.

3. HAZARDOUS MATERIALS (Descriptor and Class). The various gases or mixture of gases authorized in DOT-3AX and DOT-3AAX specification cylinders.

4. PROPER SHIPPING NAME (49 CFR 172.101). The specific chemical name or generic description, as appropriate.

5. REGULATIONS AFFECTED. 49 CFR Part 173, Subpart G; 178.36-15, § 178.36-16(a), § 178.37-15, § 178.37-16(a), 175.30.

6. MODES OF TRANSPORTATION AUTHORIZED. Motor vehicle, rail freight, cargo vessel, and cargo-aircraft only.

7. SAFETY CONTROL MEASURES. Packagings prescribed are DOT specification steel cylinders made in conformance with 49 CFR 178.36 or 178.37, as applicable, except as follows:

a. Compliance and lot definition

(1) Compliance required in all details.

(2) Lot definition: In this exemption, a "lot" means a group of cylinders, produced from a single heat steel, heat treated in a batch furnace and completed in a serial order.

Cylinders in a given lot may be heat treated in more than one furnace charge. A furnace charge may contain cylinders from different heats provided the tempering temperatures, and other heat treatment parameters for those heats are identical or similar. The lot size may not exceed 20 cylinders.

(3) Test Ring definition: A test ring is a short section of cylinder at least 24 inches long and of same material specification, diameter, and thickness as the finished cylinders it represents. The test ring will have the ends covered by welded end plates with appropriate openings to simulate the heat treatment of production cylinders. The purpose of the test ring when heat treated along with the production cylinders in a furnace charge is to represent the quality of the finished cylinders.

If a furnace charge contains production cylinders from more than one heat, a test ring for each heat must be provided. However, for the cylinders which are from a previously qualified heat a test ring need not be included in that furnace charge.

(4) Cylinders of a given lot shall be:

(i) of the same outside diameter and nominal thickness,

(ii) of the same specified material of construction;

(iii) of the same process of manufacture;

(iv) produced with the same equipment of manufacture and Heat Treatment; and

(v) subjected to a heat treatment procedure (conditions of time, temperature and atmosphere during heat treatment) that will provide acceptable mechanical properties.

b. <u>Type, size and service pressure.</u>

(1) Seamless, of diameter equal to or greater than 12.75 inches with minimum design wall thickness not less than 0.385 inches, and heat treated in a batch furnace. The maximum stress at hydrostatic test pressure shall not exceed stress calculated in accordance with 49 CFR §178.36-2b(1) or §178.37-2(b)(1), as applicable.

c. Duties of inspector.

Full compliance to 49 CFR §178.36-4 or §178.37-4 is required. Additionally, when applicable, verify that the cylinders meet the requirement of tests prescribed in this exemption. The test reports must be retained by the inspector for 15 years from the test date of each lot.

d. Flattening test:

(1) Compliance to 49 CFR 178.36-15 or 49 CFR 178.37-15, as applicable, is required.

(2) In lieu of the above, two tension and two bend specimens taken from the test ring representing each lot of cylinders defined in this exemption must be tested as described below:

(i) The procedure for tensile tests must conform to 49 CFR 178.36-16 or 178.37-16, as applicable.

(ii) The bend tests shall be carried out on two test specimens obtained by cutting ring segments out of heat treated test ring. The bend specimens must be of width at least four times the measured wall thickness. The test must be performed in accordance with the procedure described in CPI's application dated June 7, 1989 on file with Office of Hazardous Materials Exemptions and Approvals (OHMEA), and applicable standards referred to therein. The maximum allowable mandrel diameter for tensile strengths of the DOT Specification 3AX cylinders may not be greater than 4 times the minimum design wall thickness. The maximum allowable mandrel diameter for the tensile strengths of the DOT Specification 3AAX cylinders may not be greater than 5 times the design minimum wall thickness.

f. Acceptable results:

(1) Tensile test results must conform to the requirements specified in Section 178.36-17(a)(2) or 178.37-17, as applicable.

(2) The outer surface of the bend test specimen must remain free from surface cracks when bent sufficiently inward, i.e. in the direction of curvature of the cylinder wall, around a mandrel until the inner surfaces are at a distance not greater than the diameter of the mandrel.

Mandrel diameter smaller than those outlined in paragraph d.(2).(ii). above may be used. However, the foregoing acceptable test results criteria remains applicable.

g. Marking:

(1) Cylinder markings must conform to the requirements in Section 178.36-20 or 178.37-20, as applicable.

(2) Cylinders manufactured under this exemption need not be marked as required in 49 CFR Part 107, Appendix B to Subpart B.

8. SPECIAL PROVISIONS.

(a) A copy of this exemption in its current status and test procedures referenced therein must be maintained at each manufacturing facility at which the exemption cylinders are manufactured and must be made available to a DOT representative upon request.

(b) Offerors for transportation of hazardous materials specified in this exemption may use the packaging described in this exemption for the transportation of such hazardous materials so long as no modifications or changes are made to the packages, all terms of this exemption are complied with, and a copy of the current exemption is maintained at each facility from which such offering occurs.

(c) Each packaging manufactured under the authority of this exemption must be either (1) marked with the name of this manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with registration symbol designated for a specific manufacturing facility.

(d) Shippers using the packaging covered by this exemption must comply with the shipping paper, marking, labeling, and placarding requirements of 49 CFR part 172; the special packaging requirements of 49 CFR 173.3a for certain poisonous materials; all provisions of this exemption, and all other applicable requirements contained in 49 CFR Parts 100 through 180.

9. REPORTING REQUIREMENTS. The following information must be reported to Associate Administrator for Hazardous Materials Safety (AAHMS):

(a) A report providing the qualification test results for the first lot of DOT Specification 3AX and 3AAX cylinders manufactured using the test procedures prescribed in this exemption.

(b) Any incident involving loss of packaging contents or packaging failure must be reported by the shipper to the Associate Administrator for Hazardous Materials Safety as soon as practicable.

10. EXPIRATION DATE. September 30, 1992.

Issued in Washington, D.C

MAR 1 3 1991

Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

(Date)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. 20590. Attention: Exemptions Branch.

Dist: FHWA.