JUL 29 1997

U.S. Department of Transportation
Research and Special Programs Administration

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

DOT-E 11814

EXPIRATION DATE: *August 31, 1999*

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Columbiana Boiler Company
Columbiana, Ohio

2. PURPOSE AND LIMITATIONS: This exemption authorizes the manufacture, marking and sale of certain DOT Specification 51 steel portable tanks mounted in ISO frames to be used for the transportation in commerce of Division 2.1, 2.2 and 2.3 materials. This exemption provides no relief from any regulation other than as specifically stated herein.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR 178.245-1(a) in that tanks are designed, constructed, certified and stamped in accordance with Section VIII, Division 2 of the ASME Code.

5. BASIS: This exemption is based on the application of Columbiana Boiler Company dated December 27, 1996 and supplemental information dated June 23, 1997, submitted in accordance with 49 CFR 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi-fication Number	Packing Group
Division 2.1, 2.2 and 2.3 materials authorized for DOT Specification 51 portable tanks. Division 2.3 Hazard Zone A materials must be approved as specified in §173.245.	2.1 2.2 2.3	Various	N/A

7. PACKAGING(S) and SAFETY CONTROL MEASURES:

a. PACKAGING - Packagings authorized are three designs of DOT Specification 51 steel portable tanks that are designed, constructed, certified and stamped in accordance with Section VIII, Division 2 of the ASME Code, including the ASME Code "U2" stamp. Each portable tank must be constructed in accordance with Columbiana Boiler drawings 450CB335LT-1, LT-2, LT-3, LT-4 and LT-8, specifications and calculations on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) and in compliance with the following provisions:

i. Code - All tanks must comply with DOT Specification 51 in all respects except the design code. This exemption authorizes the use of Section VIII, Division 2, of the ASME Code as the design code.

ii. Material - SA299-N carbon steel

iii. Tank Dimensions and Design Criteria -

Tank Design	Water Capacity Gallons	Outside Diameter Inches	Length Inches	Shell Thickness	Head Thickness
450CB335	4500	84.0	212.25	0.5590	0.6874
450CB400	4500	84.0	212.25	0.6666	0.8014
450CB458	4500	84.0	212.25	0.7625	0.9001

iv. Pressure and Venting Data -

Tank Design	Design Pressure (Note 1) psig	Test Pressure psig	Surface Area Sq Ft	PRV Setting psi	Total Relief Capacity (Note 2) SCFH
450CB335	335	503	435	368	1,463,580
450CB400	400	600	435	400	1,740,720
450CB458	458	687	435	504	1,987,080

Notes: (1) Design pressure means "Maximum Allowable Working Pressure" as used in the ASME Code.

(2) The venting capacity requirement for each material must be determined by the flow formulas contained in the Compressed Gas Association (CGA) Pamphlet S-1.2. For each tank design, two 3-inch diameter spring loaded safety relief valves, outboard and in series with a single rupture disc set at 110% of the design pressure must be provided.

v. Design Weights -

Tank Design	Design Specific Gravity	Maximum Gross Weight	Tare Weight	Maximum Net Weight	Design Temperature Range
450CB335	1.36	67,200#	16,220#	50,980#	-40°F to 131°F
450CB400	1.32	67,200#	17,720#	49,480#	-40°F to 131°F
450CB458	1.28	67,200#	19,220#	47,980#	-40°F to 131°F

vi. Weld Joint Efficiency - 1.0
Weld joints must be 100% tested by non-destructive method as authorized by ASME Code.

vii. Corrosion Allowance - 0.0

viii. G-Loadings - Vertical down - 2; Vertical up - 2
Longitudinal - 2; Transverse - 2

ix. Openings - The following are provided on each tank:

One (1) 18" for the manway on front head
Two (2) 2" for the liquid and vapor lines on rear head
One (1) 3" for the pressure relief system on top
One (1) 3/4" for the thermowell on rear head
One (1) 1/4" for the pressure gauge on rear head

NOTE: Each bottom outlet valve must be provided with a shear section that meets the requirements of 49 CFR 178.337-12.

x. Insulation - Tanks may be provided with a sunshield (optional).

xi. Baffles - Optional.

b. TESTING -

i. Hydrostatic test certificates for each tank must be maintained by the owner and made available upon request to any representative of the DOT.

ii. Each portable tank must be retested and inspected as specified for DOT Specification 51 portable tanks in §173.32(e).

c. OPERATIONAL CONTROLS -

i. Tanks transporting Division 2.3 materials must be in conformance with 49 CFR 172.102 Special Provisions B9, B14 and §173.315, as applicable. Additionally, Division 2.3 Hazard Zone A materials must be approved as specified in §173.245.

ii. The vapor pressure (psig) of the lading at 115°F must not exceed the design pressure of the portable tank.

iii. The tank must be filled by weight in accordance with the provisions of 49 CFR 173.315.

iv. Each tank must be visually inspected prior to shipment to ensure that it has not been damaged during loading.

8. SPECIAL PROVISIONS:

a. Offerors for transportation of the hazardous materials specified in this exemption may use the packaging described in this exemption for the transportation of such hazardous materials provided 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.

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

c. A copy of this exemption, in its current status, must be maintained at each manufacturing facility at which this packaging is manufactured and must be made available to a DOT representative upon request.

d. Shippers using the packaging covered by this exemption must comply with all provisions of this exemption, and all other applicable requirements contained in 49 CFR Parts 171-180.

e. MARKING -

i. Each portable tank must be plainly marked on both sides near the middle, in letters and numerals at least two inches high on a contrasting background, "DOT-E 11814."

ii. Tanks containing materials poisonous by inhalation must be marked on two sides "Inhalation Hazard" as required by 49 CFR 172.313.

iii. Each pressure relief valve must be marked with its set pressure and flow rate in SCFH.

f. A test report documenting a satisfactory ISO prototype test for each tank design must be on file with OHMEA prior to the first shipment.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo vessel.

10. MODAL REQUIREMENTS: A copy of this exemption must be carried aboard each cargo vessel or motor vehicle used to transport packages covered by this exemption.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. Section 5101 et seq:

- All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, Parts 171-180.
- Registration required by 49 CFR 107.601 et seq., when applicable.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must also inform the AAHMS, in writing, as soon as practicable of any incidents involving the package and shipments made under this exemption.

Issued at Washington, D.C.

JUL 29 1997

(DATE)

Alan I. Roberts
Associate Administrator
for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590. Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

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