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

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

DOT-E 12289
(SECOND REVISION)

MAR 28 2003

EXPIRATION DATE: February 28, 2005

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Arbel Fauvet Rail (AFR), Cedex, France
(U.S. Agent: Mary-Hoyt Sherman Joyce
Chevy Chase, MD)

2. PURPOSE AND LIMITATIONS:

a. This exemption authorizes the manufacture, mark, sale and use of certain DOT Specification 51 steel portable tanks manufactured in accordance with Section VIII, Division 2 of the ASME Code instead of Division 1. The portable tanks, mounted in ISO frames, are authorized for the transportation in commerce of Division 2.1 and 2.2 materials. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.

b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.

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, except as specified herein.

5. BASIS: This exemption is based on the application of Arbel Fauvet Rail dated March 6, 2003, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Material Description	**Hazard Class/ Division**	**Identification Number**
Division 2.1 and 2.2 materials authorized for DOT Specification 51 portable tanks	2.1 2.2	Various

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packagings are 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 "U2" stamp. Each portable tank must be constructed in accordance with AFR drawings numbered C-0-615845/C-0-615807 (Model No. AFR 225/34 APB-1), C-0-615846/ C-0-615824 (Model No. AFR 225/34 APB-2), C-0-615890/ C-0-615880 (Model No. AFR 201/34 APB-1) and with the specifications and calculations on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) and in compliance with the following provisions:

(1) **Code:** Tanks must comply with DOT Specification 51 in all respects except for the design code. This exemption authorizes the use of Section VIII, Division 2, of the ASME Code along with ASME Code Case 2279 as the design code.

(2) **Shell and Head Material:** SA612-N carbon steel

(3) **Tank Design Criteria:**

MODEL	**AFR 225/34 APB-1**	**AFR 225/34 APB-2**	**AFR 201/34 APB-1**
Water Capacity	22,500 Liters 5,955 Gallons	22,500 Liters 5,955 Gallons	20,100 Liters 5,310 Gallons
Outside Diameter	2,330 mm 91.73 inches	2,330 mm 91.73 inches	2,200 mm 86.61 inches
Length	5,900 mm 232.28 inches	5,850 mm 230.30 inches	5,930 mm 233.46 inches
Min. Shell Thickness	16 mm 0.63 inch	12.3 mm 0.48 inch	18.9 mm 0.744 inch
Min. Head Thickness	16 mm 0.63 inch	12.3 mm 0.48 inch	18.9 mm 0.744 inch
Design Pressure[1]	25.0 bar 363 psig	19.1 bar 277 psig	31.3 bar 454 psig
Test Pressure	35.8 bar 519 psig	27.3 bar 396 psig	44.7 bar 649 psig
Exposed Surface Area	46.19 m^2 497 ft^2	45.8 m^2 493 ft^2	43.6 m^2 469 ft^2

Pressure Relief Device Setting	27.5 bar 399 psig	21 bar 305 psig	34.4 bar 499 psig
Relief Device Capacity[2]	54,598 m^3/H 1,928,096 SCFH	42,143 m^3/H 1,488,069 SCFH	61,281 m^3/H 2,164,188 SCFH
Tare Weight	8,199 kgs 18,075 lbs	6,750 kgs 14,881 lbs	9,000 kgs 19,841 lbs
Maximum Net Weight	25,801 kgs 56,881 lbs	27,250 kgs 60,075 lbs	25,000 kgs 55,115 lbs

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.

(4) **Openings:** One (1) - 610 mm (24 inch) diameter manway; one (1) - 50.8 mm (2 inch) diameter liquid phase opening; and one (1) - 50.8 mm (2 inch) diameter gas phase opening on the end; and one (1) - 76.2 mm (3 inch) diameter pressure relief device opening on the top.

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

(5) **Pressure Relief Devices:** One (1) spring loaded pressure relief valve outboard of and in series with one (1) rupture disc.

(6) **G-Loadings:** Vertical down - 2; Vertical up - 2 Longitudinal - 2; Transverse - 2

(7) **Maximum Gross Weight:** 34,000 kgs (74,956 lbs)

(8) **Design Temperature Range:** -20°C to 55°C (-40°F to 131°F)

(9) **Corrosion Allowance:** 0.0

(10) **Design Specific Gravity:** 1.2

(11) **Baffles:** 2

(12) **Insulation:** Sunshield

b. TESTING -

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

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

c. OPERATIONAL CONTROLS -

(1) The pressure produced by the lading and any gas padding at 50°C may not exceed the design pressure of the portable tank.

(2) The tank must be filled by weight in accordance with the provisions of § 173.315.

(3) Each tank must be visually inspected prior to shipment. Any unsafe condition must be corrected prior to the tank's use.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this exemption for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this exemption.

b. A person who is not a holder of this exemption, but receives a package covered by this exemption, may reoffer it for transportation provided no modification or change is made to the package or its contents and it is offered for transportation in conformance with this exemption and the HMR.

c. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

d. 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 Office of Hazardous Materials Exemptions and Approvals for a specific manufacturing facility.

e. A current copy of this exemption must be maintained at each facility where the package is manufactured under this exemption. It must be made available to a DOT representative upon request.

f. MARKING -

(1) 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 12289." Additionally, each portable tank must be marked "Case 2279" on the name plate and on the Manufacturer's Data Report.

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

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

h. Transportation of Division 2.1 (flammable gases) materials are not authorized aboard cargo vessel unless specifically authorized in the Hazardous Materials Table (§ 172.101).

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

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel 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. 5101 et seq:

- All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, Parts 171-180.

- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this 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. (Sections 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 in Washington, D.C.

MAR 28 2003

gn Robert A. McGuire (DATE)
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.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/exemptions Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: PTOlson/alb