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

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

JUN 2 0 2003

DOT-E 12628
(THIRD REVISION)

EXPIRATION DATE: **May 31, 2005**

(FOR RENEWAL, SEE 49 CFR § 107.109)

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

2. PURPOSE AND LIMITATIONS:

a. This exemption authorizes the manufacture, marking, sale and use of certain DOT Specification 51 steel portable tanks manufactured in accordance with Section VIII, Division 1 of the ASME Code, including the 1999 Addenda which allows a design margin of 3.5. 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 1 of the ASME Code, including the 1999 ASME Code Addenda which reduces the design margin to 3.5 from 4.0.

5. BASIS: This exemption is based on the application of AFR dated May 12, 2003, submitted in accordance with § 107.109.

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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 - Packagings prescribed are two models of DOT Specification 51 steel portable tanks that are designed, constructed, certified and stamped in accordance with Section VIII, Division 1 of the ASME Code, including the 1999 ASME Code Addenda which reduces the design margin to 3.5 from 4.0. Each portable tank must be constructed in accordance with AFR drawings numbered C-0-618084/C-0-617939 (Model No. AFR 243/34 BPB-1), C-0-618449/C-0-618150 (Model No. AFR 225/34 BPB-1), Pressure Sciences Incorporated finite element and fatigue analyses 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 and design margin. This exemption authorizes the use of the 1998 edition of Section VIII, Division 1, of the ASME Code along with ASME Code 1999 Addenda as the design code.

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

(3) **Tank Design Criteria:**

MODEL	AFR 243/34 BPB-1	AFR 225/34 BPB-1
Water Capacity	24,300 Liters 6,419 Gallons	22,500 Liters 5,944 Gallons
Outside Diameter	2,420 mm 95.27 inches	2,330 mm 91.73 inches
Length	5,870 mm 231.1 inches	5,836 mm 229.8 inches

Min. Shell Thickness	9.60 mm 0.378 inches	9.60 mm 0.378 inches
Min. Head Thickness	9.60 mm 0.378 inches	9.60 mm 0.378 inches
Design Pressure[1]	12.6 bar 183 psig	12.6 bar 183 psig
Test Pressure	18.0 bar 261 psig	18.0 bar 261 psig
Exposed Surface Area	48 m^2 516.7 ft^2	46 m^2 495.1 ft^2
Pressure Relief Device Setting	13.8 bar 200 psig	13.8 bar 200 psig
Relief Device Capacity[2]	31,328 m^3/H 1,106,338 SCFH	31,275 m^3/H 1,104,466 SCFH
Tare Weight	6,200 kgs 13,669 lbs	5,700 kgs 12,566 lbs
Maximum Net Weight	27,800 kgs 61,288 lbs	28,300 kgs 62,391 lbs
Inspection Opening	One - 26.378 in (670 mm) on the rear head	One - 24.409 in (620 mm) on the rear head
Service Openings[3]	Two - 2" quick closing safety foot valves with internal excess flow valve + Fort Vale type 888/2523520 L (for liquid) and R (for gas)	Two - 2" quick closing safety foot valves Mecathermic type 140392 with internal excess flow valve + Ball valves Gachot type V25 F4
Design Specific Gravity	1.15	1.25
Number of Baffles	3	2
Quantity	30	50

Owners Serial Numbers	CCRU 504001 through 504030	CCRU 433001 through 443050

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

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

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

(6) **Maximum Gross Weight:** 34,000 kgs (74,957 lbs)

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

(8) **Corrosion Allowance:** 0.0

(9) **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 46°C (115°F) may not exceed the design pressure of the portable tank.

(2) The tank must be filled 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 modifications or changes are made to the package 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 12628."

(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.

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 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. 5101 et seq:

    - All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

    - 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 inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:

JUN 20 2003

Robert A. McGuire
for Associate Administrator for
Hazardous Materials Safety

(DATE)

JUN 2 0 2003

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: PTO/am