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

JUL 1 5 2003

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

DOT-E 12145
(SECOND REVISION)

EXPIRATION DATE: June 30, 2005

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Consani Engineering (Pty) Ltd
Elsies River, South Africa
(U.S. Agent: Consani Inc., Princeton, New Jersey)

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 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.

5. BASIS: This exemption is based on the application of Consani Engineering (Pty) Ltd. dated July 3, 2003 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description -- proper shipping name	Hazard Class/ Division	Identi-fication Number	Packing Group
Division 2.1 and 2.2 materials authorized for DOT Specification 51 portable tanks.	2.1 2.2	Various	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packagings authorized 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 Code "U2" stamp. Each portable tank must be constructed in accordance with DHE drawings numbered 19.1/21.0/BCON22000/1/1, Rev. 2 dated December 12, 1998, 2/1 Rev. 2, 4/1, Rev. 1, 5/1 Rev. 1 and 8/1 all dated November 27, 1998, and with specifications and calculations on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) and in compliance with the following provisions:

(1) 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 and ASME Code Case 2279 as the design code.

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

(3) Tank Dimensions and Design Criteria -

Water Capacity	Outside Diameter	Length	Min Shell Thickness	Min Head Thickness
22000 L (5811 Gal)	227.5 cm (89.6 in)	601 cm (237 in)	12.6 mm (0.496 in)	12.4 mm (0.488 in)

(4) Pressure and Venting Data -

Design Pressure (Note (i))	Test Pressure	Surface Area	PRV Setting	Total Relief Capacity (Note (ii))
19.1 Bar (277 psig)	34.3 Bar (498 psig)	43.1 m^2 (464 Sq Ft)	21.0 Bar (304 psig)	42594 m^3/hr (1519359 SCFH)

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

(ii) 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.

(5) Design Weight and Temperature -

Design Specific Gravity	Maximum Gross Weight	Tare Weight	Maximum Net Weight	Design Temperature Range
1.32	36000 Kg (79366 lb)	6800 Kg (14991 lb)	29200 Kg (64375 lb)	55/-40 °C (131/-40 °F)

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

(7) Corrosion Allowance - 0.0

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

(9) Openings - The following are provided on each tank:

Number	Size	Description of Opening
One (1)	50 cm (19.7 in)	Manway on top
Two (2)	6.5 cm (2.56 in)	Liquid and vapor lines on the bottom of the shell
One (1)	16.4 cm (6.46 in)	Pressure relief valve on top

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

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

(11) Baffles - Optional.

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 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 12145." 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.

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, 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 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.

JUL 15 2003

Robert A. McGuire
For Associate Administrator for
Hazardous Materials Safety

(DATE)

JUL 15 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: PTOlson\AM