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

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

MAR 4 2002

DOT-E 9583
(THIRD REVISION)

EXPIRATION DATE: January 31, 2004

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Schlumberger Well Services
Div. of Schlumberger Technology Corporation
Sugarland, TX

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of certain Division 2.1 and 2.2 gases and Class 3 liquid hazardous materials in non-DOT Specification welded, high pressure cylinders for oil sampling purposes. 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 § 173.34(d) in that a safety relief device is required, except as specified herein, §§ 173.201, 173.202, 173.203, 173.302, 173.304 and 175.3 in that non-DOT specification cylinders are not authorized, except as specified herein.

5. BASIS: This exemption is based on the application of Schlumberger Well Services dated January 31, 2002, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101): MAR 4 2002

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi-fication Number	Packing Group
Compressed gases, n.o.s.	2.2	UN1956	N.A.
Compressed gases, flammable, n.o.s.	2.1	UN1954	N.A.
Flammable liquids, n.o.s. (any liquid hazardous material authorized for DOT-Specification 3A cylinders)	3	UN1993	As Appro-priate

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a small non-DOT specification, welded, high pressure cylinder designed and constructed in accordance with Flopetrol drawing M 802501 Rev. H and supplemental data on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA), and with DOT Specification 3A (§ 178.36) except as follows:

§ 178.36(a) *Type, size and service pressure.*

Cylinder is of welded construction, having a water capacity not over 630 ml, nominal, and service pressure not exceeding 10,150 psi (700 bar).

§ 178.36(b) *Steel.*

Authorized material is SA 182 F 316 stainless steel in its annealed condition.

§ 178.36(e) *Welding or brazing.*

Only circumferential butt welds are authorized. Each weld must be fully radiographed.

§ 178.36(f) *Wall thickness.*

The minimum wall thickness for a cylinder must be such that the wall stress at the minimum prescribed test pressure does not exceed 34,000 psi determined by the formula:

$$S = [P(1.3D^2 + 0.4\ d^2\ )]/[\ D^2 - d^2\ ]$$

where
S = wall stress in pounds per square inch;
P = minimum test pressure prescribed for water jacket test;
D = outside diameter in inches;
d = inside diameter in inches.

b. TESTING -

1. Each cylinder must be subjected to a proof pressure test at 16,920 psi in lieu of the required water jacket test method.

2. Physical testing and flattening test are not required. Instead, two prototype cylinders must be pressurized to burst. Burst pressure must not be less than 41,000 psi. Cylinder must have a ductile burst. Failure must initiate in the cylinder sidewall away from the weld and its heat affected zone.

3. Each cylinder must be visually inspected after each use for signs of corrosion and degradation of the packaging. Each cylinder must be subjected to a proof pressure retest at 16,920 psig once every 5 years.

c. OPERATIONAL CONTROLS -

1. The cylinder must be filled so that it will not be liquid full at 130°F.

2. Each cylinder must be prepared for shipment as specified in applicant's December 3, 1985 letter. Each cylinder must be inside a strong outside packaging as specified in the application.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who 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 reoffered for transportation in conformance with this exemption and the HMR.

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

c. MARKING - The "DOT-E 9583" must replace the "DOT 3A" marking.

d. Each cylinder need not be equipped with a safety relief device.

e. A copy of the inspector's report on the first lot of cylinders produced must be submitted to the OHMEA prior to initial shipment.

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

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

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel and aircraft used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption to the air carrier before or at the time the shipment is tendered.

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.

- 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 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.:

R. Ryan

Robert A. McGuire
For Associate Administrator for
Hazardous Materials Safety

MAR 4 2002
(DATE)

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: KFW/sln