

March 31, 2006



U.S. Department
of Transportation

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

**Pipeline and
Hazardous Materials
Safety Administration**

DOT-SP 8962
(SEVENTH REVISION)

EXPIRATION DATE: February 28, 2010

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Pacific Scientific Company (HTL/KIN-TECH DIV.)
Duarte, CA
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification pressure vessels conforming with all regulations applicable to a DOT specification 3HT except as specified herein, for the transportation in commerce of the materials authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
 - c. No party status will be granted to this special permit
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.302a(a), 175.3, and 178.44, in that non-DOT specification pressure vessels are not authorized except as specified herein.
5. BASIS: This special permit is based on the application of Pacific Scientific Company dated January 11, 2006, 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	Identi- fication Number	Packing Group
Nitrogen, compressed	2.2	UN1066	n/a

7. SAFETY CONTROL MEASURES: Prescribed packaging is a non-DOT specification girth welded stainless steel cylinder having 75 cubic inches maximum water capacity and 5300 psi maximum service pressure, manufactured in compliance with HTL drawing 41001700 Revisions A thru J and 41001701 Revisions A thru H on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA) and DOT Specification 3HT (§ 178.44) except as follows:

§ 178.44(a) Type, size and pressure.

Type and size. Girth welded stainless steel cylinders with one end fitting welded as shown on the drawing 41001701 with water capacity not over 75 cubic inches and service pressure of 5300 pounds per square inch.

§ 178.44(b) Authorized Material.

Type ARMCO Nitronic 40 (21-6-9) stainless steel with the following analysis is authorized with proper welding procedure.

<u>CHEMICAL ANALYSIS</u>	<u>PERCENT</u>
Carbon	0.040 max.
Manganese	8.00/10.00
Phosphorus	0.060 max.
Sulfur	0.030 max.
Silicon	1.00 Max.
Chromium	19.00/21.50
Nickel	5.50/7.50
Nitrogen	0.15/0.40

§ 178.44(d) Manufacture.

- (Add) Each cylinder must be subjected to a process treatment after welding and before stress relieving by hydrostatically pressurizing to at least 100 percent but not more than 110 percent of the test pressure, and maintained at this pressure for 3 minutes. The process treatment must be witnessed by the independent inspector. Total and permanent expansion need not be recorded.

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§ 178.44(e) Welding or Brazing.

Welding as prescribed in §178.44(a) of this special permit is authorized. All pressure welds must be 100 percent radiographed after hydrostatic test.

§ 178.44(f) Wall thickness.

Applies except that in paragraph (1) the minimum wall thickness must be such that the wall stress at the minimum specified test pressure must not exceed 75 percent of the minimum tensile strength of the stainless steel and such stress must not be over 121,000 psi.

§ 178.44(g) Heat treatment.

The half cylinders may be stress relieved or annealed for forming. Welded cylinders must be stress relieved at a temperature of $900^{\circ} \pm 25^{\circ}$ for one hour stress relieving to be done after process treatment and before hydrostatic test.

§ 178.44(m) Physical tests. Not required.

§ 178.44(n) Magnetic particle inspection.

Not required. Instead, each cylinder must be inspected using apparatus and procedures for liquid penetrant examination in accordance with STM E-165-65. Inspection must be performed externally on the finished cylinder after hydrostatic test. Evidence of discontinuities, which in the opinion of the independent inspector may significantly weaken or decrease the durability of the cylinder, must be cause for rejection.

§ 178.44(p) Acceptable results of tests.

- (1) Flattening required without cracking to ten times the wall thickness (t) of the cylinder.
- (2) Physical tests: Not required.
- (3) Burst pressure must be at least 4/3 times the test pressure. Actual burst pressure must be recorded.
- (4) Cycling: at least 15,000 pressurizations.

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§ 178.44(q) Rejected cylinders.

Repair of welded seams by welding prior to process treatment authorized; subsequent thereto cylinders must be heat treated and pass all prescribed tests.

§ 178.44(r) Marking.

* * *

Applies but instead of DOT-3HT, cylinders must be marked DOT-SP 8962 followed by the service pressure. Stamping of elastic expansion is not required.

8. SPECIAL PROVISIONS:

a. A statement verifying the adequacy of the pressure relief devices for each cylinder design must be submitted to the OHMSPA prior to initial shipment.

b. Cylinders are authorized for use as components of military weapons systems only.

c. Cylinders must be shipped as an integral part of the missile system.

d. Cylinders manufactured under this special permit are not authorized 20 years after the date of manufacture.

e. Each cylinder must be reinspected and hydrostatically retested every 3 years in accordance with § 180.205 as prescribed for DOT-3HT cylinders except that the rejection elastic expansion does not apply.

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

g. A person who is not a holder of this special permit, but receives a package covered by this special permit, 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 special permit and the HMR.

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

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- i. Each packaging manufactured under the authority of this special permit 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 Special Permits and Approvals for a specific manufacturing facility
- j. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- k. Packages permanently marked 'DOT-E 8962', prior to October 1, 2007 may continue to be used under this special permit for the remaining service life the package or until the special permit is no longer valid. Packages marked after October 1, 2007 must be marked 'DOT-SP 8962'.
- l. Shipping papers displaying 'DOT-E 8962' may continue to be used until October 1, 2007, provided the special permit remains valid.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight and cargo aircraft only.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a current copy of this special permit 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 special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - 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 special permit must receive

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training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

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

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term 'exemption' to 'special permit' and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Robert A. McGuire
Associate Administrator
for Hazardous Materials Safety

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

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

PO: sln/kah

