



U.S. Department
of Transportation

July 31, 2015

East Building, PHH - 30
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 15821
(FIRST REVISION)

EXPIRATION DATE: June 30, 2019

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Circor Instrumentation Technologies dba Hoke
Incorporated
Spartanburg, SC
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification cylinders manufactured from Hastelloy C-276 (ASTM B622) material conforming to all regulations applicable to a DOT specification 3A cylinder 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. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.301(a), 173.302a and 173.304a in that non-DOT specification cylinders are not authorized except as prescribed herein.

5. BASIS: This special permit is based on the application of Circor Instrumentation Technologies dba Hoke Incorporated dated June 19, 2015 submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/Division	Identification Number	Packing Group
Hazardous materials authorized for transportation in DOT Specification 3A cylinders	As appropriate	As appropriate	As appropriate

7. SAFETY CONTROL MEASURES:

a. PACKAGING -

Packaging prescribed is a non-DOT specification seamless cylinder made from Hastelloy C-276 (ASTM B622) material in accordance with Circor/Hoke drawing numbers 4D1937[]-1 Rev-L, 6D1937[]-1 Rev-E and 8D1937[]-1 Rev-B, including information for design, testing, and performance described in the Circor application on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). The cylinders must be in conformance with DOT 3A specification (§§ 178.35 and 178.36) except as follows:

§ 178.35(c) Duties of inspector:

(1), (2), (3) and (4) * * *

[Add]

(5) Verify that the design qualification tests prescribed in § 178.36(d) of this special permit have been performed with satisfactory results.

* * *

§ 178.35(f) Markings

(1) (i) "DOT SP 15821" in lieu of "DOT 3A" followed by the service pressure. Test pressure to be marked near or following the service pressure as "TP" followed by test pressure.

* * *

§ 178.36(a) Type, size and service pressure

(1) Seamless, water capacity not over 100 cubic inches and service pressure not to exceed 3600 psig.

(2) Not applicable

§ 178.36(b) Authorized material

The authorized material is a Nickel-Chrome-Moly based super alloy, Hastelloy C-276 (ASTM B622).

* * *

§ 178.36(d) Manufacture

[Add]

(1) Cylinders must be manufactured from seamless tube or pipe. The cylinder end domes must be integral and formed by the hot swaging process.

(2) Each new design must be qualified for production by subjecting at least three prototype samples to pressure cycling and burst tests as follows:

(i) Cycle Test: The cycle test must be performed on the completed cylinder after hydrostatic test by subjecting the cylinder to successive pressurizations from the lower cyclic pressure to the upper cyclic pressure at a rate not to exceed 10 cycles per minute. The lower cyclic pressure must not exceed 10 percent of the upper cyclic pressure. The upper cyclic pressure must be at least equal to the minimum prescribed test pressure.

(ii) Burst Pressure Test: The burst test must be performed on the completed cylinder by hydraulically pressurizing the cylinder to destruction. Rate of pressurization must not exceed 200 psi per second.

§ 178.36(f) Wall thickness

The minimum wall thickness must be such that the wall stress at the minimum prescribed test pressure does not exceed 90% of the guaranteed minimum yield strength of the authorized material, Hastelloy C-276. A wall stress of more than 36000 psi is not permitted.

* * *

§ 178.36(1) Acceptable results of tests

[Add]

- (3) Cylinders subjected to design qualification cycling tests must withstand at least 12,000 cyclic pressurizations without distortion or failure.
- (4) Cylinders subjected to design qualification burst tests must withstand a pressure of at least 2.5 times the service pressure without failure. Failure must initiate in the sidewall in a longitudinal direction, and the cylinder must remain in one piece.

* * *

b. REQUALIFICATION - Each cylinder must be requalified every five years by visual inspection and hydrostatic testing in accordance with § 180.205 and § 180.209 as prescribed for DOT 3A specification cylinders.

c. OPERATIONAL CONTROLS - Special filling limits specified in § 173.302a(b) are not authorized. Under no circumstances are these cylinders to be filled to a pressure exceeding the marked service pressure at 70°F.

8. SPECIAL PROVISIONS:

a. 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.

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

c. Each cylinder must be shipped in strong non-bulk outer packaging in accordance with § 173.301(a)(9).

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

e. 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.

f. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.

g. Each cylinder used for the transportation of a material that is toxic by inhalation (TIH) must be marked "INHALATION HAZARD" near the required labels.

h. Persons using the packaging covered by this special permit to ship TIH materials must comply with the shipping papers, marking, labeling and placarding requirements of 49 CFR Part 172 for TIH materials.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor Vehicle, Rail Freight, and Cargo Vessel.

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10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle or cargo vessel used to transport packages covered by this special permit.
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 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

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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 Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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: RS:dl