

December 11, 2013



U.S. Department
of Transportation

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

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 12018
(EIGHTH REVISION)

EXPIRATION DATE: November 30, 2017

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: National Oilwell Varco, Inc.
(Former Grantee: NOV Hydra-Rig)
Fort Worth, Texas
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, marking, sale and use of a non-DOT specification insulated portable tank conforming with all regulations applicable to a DOT Specification MC-338 insulated cargo tank, except as specified herein, for the transportation in commerce of nitrogen, argon or oxygen, refrigerated liquids. 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.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.318 and § 176.76(g)(1) in that a non-DOT specification packaging is authorized as specified herein.
5. BASIS: This special permit is based on the application of Hydra-Rig dated November 8, 2013, submitted in accordance with § 107.109.

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6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous materials description		
Proper shipping name	Hazard Class/ Division	Identification Number
Argon, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1951
Nitrogen, refrigerated liquid <i>cryogenic liquid</i>	2.2	UN1977
Oxygen, refrigerated liquid (<i>cryogenic liquid</i>)	2.2	UN1073

7. SAFETY CONTROL MEASURES:a. PACKAGING -

(1) Packaging authorized is an insulated non-DOT specification portable tank designed and constructed in accordance with DOT Specification MC-338 cargo tank motor vehicle, except as modified herein. The portable tank is enclosed in an ISO type frame and is vacuum-insulated. Design pressure is 46 PSIG for the internal tank. Design temperature is -320EF for the inner tank and any part, valve or fitting that may come in contact with the lading. Water capacity is 1920 gallons, nominal Tank material is SA 240 Type 304 for the inner tank and A572 Grade 50 and A36 carbon steel for the outer jacket.

(2) Tanks built after 1/1/98 must conform with MVE Drawing C-10735473 Rev D dated 9/9/97, Hydra Rig Drawings NE100004 Rev C dated 10/17/97, NE100007 Rev C dated 10/17/97, NE100009 Rev B dated 10/17/97. Tanks built before 1/1/98 must conform with MVE Drawing C-10735473 No Rev dated 5/18/95, C-10735473 Rev A dated 1/10/96, C-10735473 Rev B dated 7/23/96, or C-10735473

Rev C dated 5/22/97, and other referenced drawings. All tanks must conform with calculations, specifications and drawings on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA) and with § 178.338, except as follows:

(i) § 178.338-10 does not apply.

(ii) The portable tank need not conform with § 178.338-13(b) or (c). Lifting lugs, framework and any anchoring to the inner tank or the tank jacket must conform with § 178.338-13(a).

(iii) Portable tanks that meet the definition of "container" must meet the requirements of 49 CFR parts 450 thru 453, and each design must be qualified in accordance with § 178.270-13(c), even if used in domestic service.

(iv) ADOT-SP 12018" must replace the mark AMC-338" on the nameplate specified in § 178.338-18(a).

(3) Tanks built before 1/1/98 must have serial numbers listed on the MVE data sheet dated February 26, 1998 in the application for modification on file with OHMEA.

(4) The following provisions apply to tanks built after 9/1/98:

(i) At the time of delivery, the manufacturer of a portable tank must furnish to the owner of the tank, the tank manufacturer=s data report as required by the ASME Code, and a certificate bearing the tank serial number stating that the portable tank conforms to the requirements of this special permit. For each portable tank the certificate must be signed by a responsible official of the manufacturer.

(ii) For multiple stage construction, each manufacturer who performs a manufacturing operation on the portable tank or portion thereof must furnish to the succeeding manufacturer, at the time of delivery, a certificate covering the manufacturing operation performed by that manufacturer, and any certificates received from

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previous manufacturers. Each certificate must be signed by an official of the manufacturing firm responsible for the portion of the tank represented thereby. The final manufacturer must furnish the owner with all certificates.

b. TESTING - Each portable tank must be reinspected and retested once every five years in accordance with the procedure prescribed in § 173.32(e) for DOT Specification 51 portable tanks. The test pressure for the inner tank must be determined from the following formulas:

If there is no vacuum in the outer jacket during test:

$$P_T = 1.25 \times [P_d + H_s + 14.7]$$

If vacuum exists in the outer jacket during test:

$$P_T = 1.25 \times [P_d + H_s + 14.7] - 14.7$$

Where:

P_T = Test pressure, psig

P_d = Design pressure (the sum of the maximum allowable working pressure, liquid head and 14.7 psi)

H_s = Static head of liquid in inner tank, psi

c. OPERATIONAL CONTROLS -

(1) Each portable tank must be prepared and shipped as required in § 173.318, as applicable for the lading.

(2) Shipments by cargo vessel must conform with the following:

(i) The package must conform with 49 CFR 176.76(g). The portable tank must be stowed on deck and may not be overstowed with other containers or freight.

(ii) The legend "One-Way Travel Time _____ Hours" or "OWTT _____ Hours" must be marked on the shipping paper and on the dangerous cargo manifest immediately after the container description. The

OWTT is determined by the formula:

$$\text{OWTT} = \text{MRHT} - 24 \text{ hours.}$$

(iii) The offeror must prepare a written record of the portable tank's pressure and ambient (outside) temperature at the following times must be prepared for each shipment.

- (A) At the start of each trip;
- (B) Immediately before and after any manual venting;
- (C) At least every 24 hours; and
- (D) At the destination point.

(iv) Any lading road relief valve set at a pressure lower than that prescribed for the (safety) pressure relief valve must be closed during transportation by cargo vessel unless the holding time was determined based on the setting of the pressure control valve.

(3) No person may transport or offer for transportation a charged portable tank unless the pressure of the lading is equal to or less than that used to determine the marked rated holding time (MRHT) and the OWTT is equal to or greater than the elapsed time between the start and termination of travel.

(4) Each offeror must determine the actual holding time for each tank before each shipment. If it is determined that the actual holding time is less than 90 percent of the (MRHT) of the tank, the tank may not be refilled until it is restored to its MRHT or the tank is re-marked with the reduced holding time determined by this examination.

(5) The manufacturer must determine the holding time and the MRHT of the first portable tank and must submit the results thereof to OHMSPA prior to initial shipment.

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 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.

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

d. 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.

e. 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.

f. The portable tank owner must retain the data reports, certificates and related papers throughout his ownership of the portable tank.

g. MARKING - Each portable tank must be plainly marked "DOT-SP 12018" on both sides near the middle, in letters at least two inches high on a contrasting background.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo vessel.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel or motor vehicle 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, 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 the 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 Dr. Magdy El-Sibaie
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: PTO/dl