January 22, 2016

U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

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

DOT-SP 15972
(THIRD REVISION)

EXPIRATION DATE: December 31, 2018

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: EnTrans International, LLC.
Athens, TN

2. PURPOSE AND LIMITATIONS:

a. This special permit authorizes the manufacture, mark, sale and use of DOT specification cargo tanks conforming with all regulations applicable to DOT 400 series cargo tanks except for the use of materials not authorized in § 178.345-2. The authorized materials of construction are listed in the accompanying table. 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 §§ 178.345-2, 178.346-2, 178.347-2, 178.348-2 and 178.345-3, in that the use of a material not listed in Section II of the ASME Code is not authorized, except as specified herein.

5. BASIS: This special permit is based on the application of EnTrans International, LLC dated May 05, 2015, submitted in accordance with 107.105 and the public proceeding thereon and additional information submitted on October 29, 2015.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	**Hazard Class/ Division**	**Identi-fication Number**	**Packing Group**
As authorized in the HMR for each cargo tank	Various	Various	Various

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packagings prescribed are certain DOT specification cargo tank motor vehicles conforming in all respects to either DOT Specification 406, 407 or 412, except that the materials of construction are limited to materials shown in the tables. The allowable design stresses for all materials shall be such that the design margin for all cargo tanks will be 4:1. Allowable stresses and minimum thicknesses shall be as shown in the tables attached to this special permit.

b. TESTING - All cargo tank motor vehicles fabricated under the terms of this special permit must be reinspected and retested in accordance with the requirements in 49 CFR PART 180, Subpart E for the applicable DOT 400 series cargo tank.

c. MARKING - Each cargo tank motor vehicle must be plainly marked on both sides near the middle in letters at least two inches in height on a contrasting background SP-15972." Each vehicle identification number must be marked on both sides of the vehicle as specified in §§ 172.302(b) and (c).

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 packaging 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 packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor Vehicle.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each 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:

- All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- 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.
- 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 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.

PTO: Staniszewski:SG

Material of interest

Material	Common Name	Minimum Tensile Strength (Rm)			Minimum Elongation (A)			Correction Factor (Cf)
Unknown	Portable Tank Reference	370	Mpa	Per 178.274(a)(3) reference steel	27	%	Per 178.274(a)(3) reference steel	1.00
UNS K03101	SA-515 Gr. 70 Mild Steel	485	Mpa	Per ASME Section II Part D	21	%	SA-515 Gr 70 Per ASME Section II Part A	0.99
UNS K02403	SA-516 Gr. 65 Mild Steel	450	Mpa	Per ASME Section II Part D	23	%	SA-516 Gr 65 Per ASME Section II Part A	0.99
UNS N08020	Alloy 20	552	Mpa	Per ASME Section II Part D	35	%	Per Rolled Alloys Data Sheet	0.80
UNS N08367	AL 6XN	689	Mpa	Per ASME Section II Part D ≤ 3/16"	47	%	Per Allegheny Ludlum Data Sheets	0.68
UNS N08367	AL 6XN	655	Mpa	Per ASME Section II Part D > 3/16"	47	%	Per Allegheny Ludlum Data Sheets	0.69
UNS R50400	Titanium, Grade 2	345	Mpa	Per ASME Section II Part D	20	%	Per Allegheny Ludlum Data Sheets	1.13
UNS R50400	TITANIUM, CC2497-2	400	Mpa	Per ASME CC 2497-2	20	%	Per Allegheny Ludlum Data Sheets	1.08
UNS R50550	Titanium, Grade 3	448	Mpa	Per ASME Section II Part D	18	%	Per Allegheny Ludlum Data Sheets	1.07
UNS S32003	AL 2003	690	Mpa	Per ASME CC 2503 ≤ 3/16"	40	%	Per Allegheny Ludlum Data Sheets	0.71
UNS S32003	AL 2003	655	Mpa	Per ASME CC 2503 > 3/16"	40	%	Per Allegheny Ludlum Data Sheets	0.73
UNS S32101	LDX2101	700	Mpa	Per ASME CC 2418 ≤ 1/4"	30	%	Per Allegheny Ludlum Data Sheets	0.78
UNS S32101	LDX2101	650	Mpa	Per ASME CC 2418 > 1/4"	30	%	Per Allegheny Ludlum Data Sheets	0.80
UNS S32205	AL 2205	621	Mpa	Per ASME Section II Part D	30	%	Per Allegheny Ludlum Data Sheets < 3/16"	0.81
UNS S32205	AL 2205	621	Mpa	Per ASME Section II Part D	35	%	Per Allegheny Ludlum Data Sheets ≥ 3/16"	0.77

DOT 406 Table Volume capacity in gallons per inch	Up to 14	Over 14 to 23	Over 23
	178.346-2 Table I		
Reference Steel (SA-516 Gr. 70) [UNS K02700]	0.100	0.115	0.129
	178.346-2 Table I Replacement		
Alloy 20 (SB 463) [UNS N08020]	0.090	0.092	0.104
AL-6XN (SB 688) [UNS N08367]	0.090	0.090	0.090
Titanium Grade 2 (SB 265) [UNS R50400]	0.113	0.130	0.146
Titanium Grade 2 CC2497-2 (SB 265) [UNS R50400]	0.108	0.124	0.139
Titanium Grade 3 (SB 265) [UNS R50550]	0.107	0.124	0.139
AL 2003 (SA 240) [UNS S32003]	0.090	0.090	0.092
AL 2101 (SA 240) [UNS S32101]	0.090	0.090	0.101
AL 2205 (SA 240) [UNS S32205/S31803]	0.090	0.093	0.105

Cargo tank rated capacity (gal)	Up to 4,500	Over 4,500 to 8,000	Over 8,000 to 14,000	Over 14,000
	178.346-2 Table II			
Reference Steel (SA-516 Gr. 70) [UNS K02700]	0.100	0.115	0.129	0.143
	178.346-2 Table II Replacement			
Alloy 20 (SB 4630) [UNS N08020]	0.090	0.092	0.104	0.115
AL-6XN (SB 688) [UNS N08367]	0.090	0.090	0.090	0.097
Titanium Grade 2 (SB 265) [UNS R50400]	0.113	0.130	0.146	0.162
Titanium Grade 2 CC2497-2 (SB 265) [UNS R50400]	0.108	0.124	0.139	0.154
Titanium Grade 3 (SB 265) [UNS R50550]	0.107	0.124	0.139	0.154
AL 2003 (SA 240) [UNS S32003]	0.090	0.090	0.092	0.102
AL 2101 (SA 240) [UNS S32101]	0.090	0.090	0.101	0.112
AL 2205 (SA 240) [UNS S32205/S31803]	0.090	0.093	0.105	0.116

DOT 407 Table Volume capacity in gallons per inch	Up to 10	Over 10 to 14	Over 14 to 18	Over 18 to 22	Over 22 to 26	Over 26 to 30	Over 30
	178.347-2 Table I and II						
Reference Steel (SA-516 Gr. 70) [UNS K02700]	0.100	0.100	0.115	0.129	0.129	0.143	0.156
	178.347-2 Table I and II Replacement						
Alloy 20 (SB 463) [UNS N08020]	0.090	0.090	0.092	0.104	0.104	0.115	0.125
AL-6XN (SB 688) [UNS N08367]	0.090	0.090	0.090	0.090	0.090	0.097	0.105
Titanium Grade 2 (SB 265) [UNS R50400]	0.113	0.113	0.130	0.146	0.146	0.162	0.177
Titanium Grade 2 CC2497-2 (SB 265) [UNS R50400]	0.108	0.108	0.124	0.139	0.139	0.154	0.168
Titanium Grade 3 (SB 265) [UNS R50550]	0.107	0.107	0.124	0.139	0.139	0.154	0.168
AL 2003 (SA 240) [UNS S32003]	0.090	0.090	0.090	0.092	0.092	0.102	0.111
AL 2101 (SA 240) [UNS S32101]	0.090	0.090	0.090	0.101	0.101	0.112	0.122
AL 2205 (SA 240) [UNS S32205/S31803]	0.090	0.090	0.093	0.105	0.105	0.116	0.127

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DOT 412 Table																	
Volume Capacity		10 or less			Over 10 to 14			Over 14 to 18			Over 18						
Lading Density (#/gal)		Up to 10	Over 10 up to 13	Over 13 up to 16	Over 16	Up to 10	Over 10 up to 13	Over 13 up to 16	Over 16	Up to 10	Over 10 up to 13	Over 13 up to 16	Up to 10	Over 10 up to 13	Over 13 up to 16	Over 10 up to 13	Over 13 up to 16
Reference Steel (SA-516 Gr. 70) [UNS K02700]																	
Head Thickness (in.)		**178.348-2 Table I**															
		0.100	0.129	0.157	0.187	0.129	0.157	0.187	0.250	0.157	0.250	0.250	0.157	0.250	0.250	0.250	0.312
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	**178.348-2 Table II**															
		0.100	0.129	0.157	0.187	0.100	0.129	0.157	0.187	0.100	0.129	0.157	0.129	0.157	0.187	0.157	0.187
	Circ. Reinforcement over 36" to 54"	0.100	0.129	0.157	0.187	0.100	0.129	0.157	0.187	0.129	0.157	0.187	0.157	0.187	0.250	0.250	0.250
	Circ. Reinforcement over 54" to 60"	0.100	0.129	0.157	0.187	0.129	0.157	0.187	0.250	0.157	0.250	0.250	0.187	0.250	0.250	0.250	0.312
Alloy 20 (SB 463) [UNS N08020]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.090	0.104	0.126	0.150	0.104	0.126	0.150	0.201	0.126	0.201	0.201	0.126	0.201	0.201	0.201	0.251
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.090	0.104	0.126	0.150	0.090	0.104	0.126	0.150	0.090	0.104	0.126	0.104	0.126	0.126	0.126	0.150
	Circ. Reinforcement over 36" to 54"	0.090	0.104	0.126	0.150	0.090	0.104	0.126	0.150	0.104	0.126	0.150	0.126	0.150	0.150	0.201	0.201
	Circ. Reinforcement over 54" to 60"	0.090	0.104	0.126	0.150	0.104	0.126	0.150	0.201	0.126	0.201	0.201	0.150	0.201	0.201	0.201	0.251
AL-6XN (SB 688) [UNS N08367]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.090	0.090	0.106	0.126	0.090	0.106	0.126	0.169	0.106	0.169	0.169	0.106	0.169	0.169	0.169	0.211
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.090	0.090	0.106	0.126	0.090	0.090	0.106	0.126	0.090	0.106	0.126	0.090	0.106	0.106	0.106	0.126
	Circ. Reinforcement over 36" to 54"	0.090	0.090	0.106	0.126	0.090	0.090	0.106	0.126	0.090	0.106	0.126	0.106	0.126	0.126	0.169	0.169
	Circ. Reinforcement over 54" to 60"	0.090	0.090	0.106	0.126	0.090	0.106	0.126	0.169	0.106	0.169	0.169	0.126	0.169	0.169	0.169	0.211
Titanium Grade 2 (SB 265) [UNS R50400]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.113	0.146	0.178	0.212	0.146	0.178	0.212	0.283	0.178	0.283	0.283	0.178	0.283	0.283	0.283	0.353
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.113	0.146	0.178	0.212	0.113	0.146	0.178	0.212	0.113	0.146	0.178	0.146	0.178	0.178	0.178	0.212
	Circ. Reinforcement over 36" to 54"	0.113	0.146	0.178	0.212	0.113	0.146	0.178	0.212	0.146	0.178	0.212	0.178	0.212	0.212	0.283	0.283
	Circ. Reinforcement over 54" to 60"	0.113	0.146	0.178	0.212	0.146	0.178	0.212	0.283	0.178	0.283	0.283	0.212	0.283	0.283	0.283	0.353
Titanium Grade 2 CC2497-2 (SB 265) [UNS R50400]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.108	0.139	0.169	0.201	0.139	0.169	0.201	0.269	0.169	0.269	0.269	0.169	0.269	0.269	0.269	0.336
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.108	0.139	0.169	0.201	0.108	0.139	0.169	0.201	0.108	0.139	0.169	0.139	0.169	0.169	0.169	0.201
	Circ. Reinforcement over 36" to 54"	0.108	0.139	0.169	0.201	0.108	0.139	0.169	0.201	0.139	0.169	0.201	0.169	0.201	0.201	0.269	0.269
	Circ. Reinforcement over 54" to 60"	0.108	0.139	0.169	0.201	0.139	0.169	0.201	0.269	0.169	0.269	0.269	0.201	0.269	0.269	0.269	0.336
Titanium Grade 3 (SB 265) [UNS R50550]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.107	0.139	0.169	0.201	0.139	0.169	0.201	0.269	0.169	0.269	0.269	0.169	0.269	0.269	0.269	0.335
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.107	0.139	0.169	0.201	0.107	0.139	0.169	0.201	0.107	0.139	0.169	0.139	0.169	0.169	0.169	0.201
	Circ. Reinforcement over 36" to 54"	0.107	0.139	0.169	0.201	0.107	0.139	0.169	0.201	0.139	0.169	0.201	0.169	0.201	0.201	0.269	0.269
	Circ. Reinforcement over 54" to 60"	0.107	0.139	0.169	0.201	0.139	0.169	0.201	0.269	0.169	0.269	0.269	0.201	0.269	0.269	0.269	0.335
AL 2003 (SA 240) [UNS S32003]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.090	0.092	0.112	0.133	0.092	0.112	0.133	0.178	0.112	0.178	0.178	0.112	0.178	0.178	0.178	0.226
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.090	0.092	0.112	0.133	0.090	0.092	0.112	0.133	0.090	0.092	0.112	0.092	0.112	0.112	0.092	0.112
	Circ. Reinforcement over 36" to 54"	0.090	0.092	0.112	0.133	0.090	0.092	0.112	0.133	0.092	0.112	0.133	0.112	0.133	0.133	0.112	0.133
	Circ. Reinforcement over 54" to 60"	0.090	0.092	0.112	0.133	0.092	0.112	0.133	0.178	0.112	0.178	0.178	0.133	0.178	0.178	0.178	0.226
AL 2101 (SA 240) [UNS S32101]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.090	0.101	0.123	0.146	0.101	0.123	0.146	0.195	0.123	0.195	0.195	0.123	0.195	0.195	0.123	0.244
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.090	0.101	0.123	0.146	0.090	0.101	0.123	0.146	0.090	0.101	0.123	0.101	0.123	0.123	0.101	0.123
	Circ. Reinforcement over 36" to 54"	0.090	0.101	0.123	0.146	0.090	0.101	0.123	0.146	0.101	0.123	0.146	0.123	0.146	0.146	0.123	0.146
	Circ. Reinforcement over 54" to 60"	0.090	0.101	0.123	0.146	0.101	0.123	0.146	0.195	0.123	0.195	0.195	0.146	0.195	0.195	0.146	0.244
AL 2205 (SA 240) [UNS S32205/S31803]		**178.348-2 Table I Replacement**															
Head Thickness (in.)		0.090	0.105	0.128	0.152	0.105	0.128	0.152	0.193	0.128	0.193	0.193	0.128	0.193	0.193	0.193	0.241
		178.348-2 Table II Replacement															
Shell Thickness (in.)	Circ. Reinforcement @ 36" or less	0.090	0.105	0.128	0.152	0.090	0.105	0.128	0.152	0.090	0.105	0.128	0.105	0.128	0.128	0.105	0.128
	Circ. Reinforcement over 36" to 54"	0.090	0.105	0.128	0.152	0.090	0.105	0.128	0.152	0.105	0.128	0.152	0.128	0.152	0.152	0.128	0.152
	Circ. Reinforcement over 54" to 60"	0.090	0.105	0.128	0.152	0.105	0.128	0.152	0.193	0.128	0.193	0.193	0.152	0.193	0.193	0.193	0.241

Yellow Represents Correction Factors Changed Based on Thickness