



U.S. Department  
of Transportation

Pipeline and Hazardous  
Materials Safety  
Administration

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

FEB 18 2014

Mr. David L. Thompson  
Thompson Tank, Inc.  
P.O. Box 790  
Lakewood, CA 90714-0790

Ref No.: 13-0207

Dear Mr. Thompson:

This is a response to your October 24, 2013 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) with regard to the manufacture of DOT specification cargo tanks. Specifically, you question whether it is permissible to manufacture a DOT 407, DOT 412, or dual specification DOT 407/412 cargo tank for vacuum loading without being constructed and certified in accordance with the Section VIII of the ASME Code for an external design pressure of at least 15 psig.

In accordance with the general design and construction requirements applicable to cargo tanks, in § 178.345-1(f), each DOT 412 cargo tank with a MAWP greater than 15 psig, and each DOT 407 cargo tank with a MAWP greater than 35 psig must be constructed and certified in conformance with Section VIII of the ASME Code, except as limited or modified by the applicable cargo tank specification.

Specification DOT 412 cargo tanks designed to be loaded by vacuum must have a minimum external MAWP of 15 psig in accordance with § 178.348-1(c). Any DOT 412 cargo tank with a MAWP greater than 15 psig must be designed, constructed and certified in conformance with Section VIII of the ASME Code per § 178.348-1(e)(1). Unless a DOT 412 cargo tank was manufactured with a MAWP of exactly 15 psig (the minimum MAWP for vacuum load capable DOT 412 cargo tanks), it would also be required to be constructed and certified in accordance with Section VIII of the ASME Code.

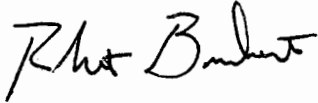
Specification DOT 407 cargo tanks designed to be loaded by vacuum must have a minimum external design pressure of 15 psig and must be designed, constructed and certified in accordance with Section VIII of the ASME Code, in accordance with § 178.347-1(c). Therefore, a DOT 407 cargo tank designed for vacuum loading would not be permitted to be manufactured without being constructed and certified in accordance with Section VIII of the ASME Code.

A cargo tank built to a dual specification DOT 407/412, designed to be loaded by vacuum, must conform to both of the applicable specifications. Therefore since all DOT 407 cargo tanks designed for vacuum loading must be constructed and certified in accordance with

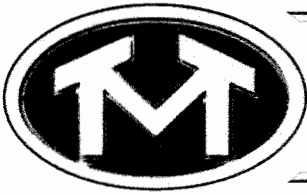
Section VIII of the ASME Code and have a minimum external design pressure of 15 psig, the manufacture of this multi-specification cargo tank would not be permitted without fulfilling these requirements.

I hope this information is helpful. If you have any more questions, please do not hesitate to contact this office.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Benedict". The signature is written in a cursive style with a large initial "R".

Robert Benedict  
Chief, Standards Development  
Standards and Rulemaking Division



THOMPSON TANK, INC.

ASME - D.O.T CERTIFICATION  
D.O.T. INSPECTION - TESTING  
DESIGN ENGINEERING • CONSTRUCTION

**THOMPSON VACUUM-PRESSURE UNITS**

Suchak  
§ 178.347-1(c)  
§ 178.348-1(c)  
§ 180.405(f)(1)(i)  
Cargo Tanks  
13-0207

13 OCT 25 PM 3:30

DOT/RSPA/PHMS  
UNIT

October 24, 2013

U.S. DOT  
PHMSA Office of Hazardous Material  
Standards  
Attn: PHH-10  
East building  
1200 New Jersey Ave., SE.  
Washington, DC 20590-0001

Gentlemen,

Is it permissible to manufacture a DOT-407 or a DOT-412, or a Dual Specification DOT-407/DOT-412 Cargo Tank for vacuum loading without being constructed and certified in accordance with the ASME Code for an external design pressure of at least 15psi?

Reference: 178.347-1 ©  
178.348-1 ©  
180.405 (f) (1) (i)

Sincerely,

David L. Thompson  
Thompson Tank, Inc.