



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

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

OCT 22 2014

Mr. Oberst Mulet
Engineer II
HSB Global Standards, Inc.
One State Street
P.O. Box 299
Hartford, CT 06416-0299

Ref. No.: 14-0124

Dear Mr. Mulet:

This responds to your June 23, 2014 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to specification 4L welded insulated cylinders. Specifically, in your letter you cite § 178.57(h), which states that:

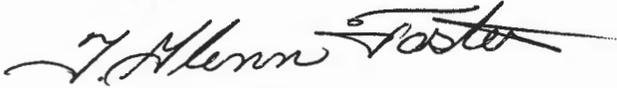
- (h) *Openings in cylinder.* Openings in cylinders must conform to the following:
- (1) Openings are permitted in heads only. They must be circular and may not exceed 3 inches in diameter or one third of the cylinder diameter, whichever is less. Each opening in the cylinder must be provided with a fitting, boss or pad, either integral with, or securely attached to, the cylinder body by fusion welding. Attachments to a fitting, boss or pad may be made by welding, brazing, mechanical attachment, or threading.
 - (2) Threads must comply with the following:
 - (i) Threads must be clean-cut, even, without checks and cut to gauge.
 - (ii) Taper threads to be of a length not less than that specified for NPT.
 - (iii) Straight threads must have at least 4 engaged threads, tight fit and calculated shear strength at least 10 times the test pressure of the cylinder. Gaskets, which prevent leakage and are inert to the hazardous material, are required.

In your letter, you ask whether the opening diameter is defined as the opening diameter made to the cylinder body before being provided with a fitting or boss? Or, is the opening defined as the inside diameter of the fitting or boss after attached to the cylinder body by fusion welding?

As provided in § 178.57(h) of the HMR, the limit on the opening size described in paragraph (h) is the opening on the cylinder head, before a fitting, boss, or pad is applied. Furthermore, an opening that is not a proper size could affect the stresses in the cylinder head.

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in black ink that reads "T. Glenn Foster". The signature is written in a cursive style with a long, sweeping underline.

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Nickels
178.57
Cylinders
14-0124

Dodd, Alice (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Monday, June 23, 2014 3:55 PM
To: Hazmat Interps
Subject: FW: 178.57 Specification 4L welded insulated cylinders, opening size definition.

This caller requested we submit this e-mail for a formal letter of interpretation. I previously spoke with this caller in the HMIC and received guidance from Cheryl Freeman regarding this issue. Thanks, Victoria

From: Mulet Oberst - Hartford-HSBCT [mailto:oberst_mulet@hsbct.com]
Sent: Wednesday, June 11, 2014 8:00 AM
To: INFOCNTR (PHMSA)
Subject: 178.57 Specification 4L welded insulated cylinders, opening size definition.

Dear PHMSA representative:

I have the following question pertaining to opening size definition in 178.57 Specification for 4L welded cylinders. In paragraph 178.57(h) of the 49 CFR Transportation, it refers to openings that are permitted in heads only. This paragraph provides the maximum opening diameter size requirement of such openings and it also states that each opening must be provided with a fitting, boss or pad, either integral with, or securely attached to, the cylinder body by fusion welding. It is not clear as to what is considered to be the opening size. Is the opening diameter defined as the opening diameter made to the cylinder body before being provided with a fitting or boss? Or is the opening defined as the inside diameter of the fitting or boss after attached to the cylinder body by fusion welding? I appreciate your reply on this matter. Thank you.

Regards;

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