



U.S. Department of Transportation  
**Pipeline and Hazardous Materials  
Safety Administration**

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

MAY 15 2013

Dr. Wesley D. Scott  
Western International Gas & Cylinders  
P.O. Box 668, 7173 Highway 159 East  
Bellville, Texas 77418

Ref No.: 13-0075

Dear Dr. Scott:

This is a response to your April 4, 2013 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 100-185) with regard to UN pressure receptacles. Specifically, you request clarification of the "H" marking required by § 173.301b(f) and the filling of steel UN pressure receptacles.

In your email you note that § 173.301b(f) requires that a steel UN pressure receptacle bearing an "H" mark be used for hydrogen bearing gases. You indicate that based on information provided at Compressed Gas Association (CGA) meetings and discussions with Mark Toughiry of PHMSA's Engineering and Research Division, the intent of this section is not to limit pressure receptacles bearing an "H" marking exclusively to hydrogen bearing or embrittling gas service. You request confirmation that pressure receptacles bearing the "H" mark are suitable for use for all gases in which a steel cylinder is specified as acceptable.

It is the opinion of this office that pressure receptacles bearing the "H" mark may be filled with hydrogen bearing gases, embrittling gases, or any other gases for which a steel pressure receptacle is indicated as appropriate. For hydrogen bearing and embrittling gases for which Special Provision N89 is listed in column 7 of the Hazardous Materials Table (HMT) in § 172.101 and when a steel UN pressure receptacle is used, that pressure receptacle must bear the "H" mark.

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

Sincerely,

Robert Benedict  
Chief, Standards Development  
Standards and Rulemaking Division

Suchak  
§173.301b

**Drakeford, Carolyn (PHMSA)**

**From:** INFOCNTR (PHMSA)  
**Sent:** Tuesday, April 09, 2013 2:18 PM  
**To:** Drakeford, Carolyn (PHMSA)  
**Subject:** FW: Request for Interpretation 49CFR173.301b

Cylinders  
13-0075

Hi Carolyn,

This caller would like their letter submitted a letter of interpretation.

Thanks,  
Victoria

**From:** Wesley Scott [<mailto:wesleyscott@westernintl.com>]  
**Sent:** Thursday, April 04, 2013 3:25 PM  
**To:** INFOCNTR (PHMSA)  
**Cc:** Toughiry, Mark (PHMSA)  
**Subject:** Request for Interpretation 49CFR173.301b

Western International Gas & Cylinders, Inc. requests a formal interpretation of 49CFR173.301b, specifically sub-paragraph (f).

(f) Hydrogen bearing gases. A steel UN pressure receptacle bearing an "H" mark must be used for hydrogen bearing gases or other embrittling gases that have the potential of causing hydrogen embrittlement.

Western International Gas & Cylinders, Inc. is a distributor of UN/ISO cylinders manufactured to ISO specification 9809-1. One of our customers has expressed concern that "H" marked cylinders can only be used for hydrogen bearing/embrittling gases based on the phrase "must be used for" in 49CFR173.301b(f).

It is Western's understanding based on information received at Compressed Gas Association (CGA) meetings and discussion with Mark Toughiry (US Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Engineering and Research) that the intent of 49CFR173.301b(f) is to require hydrogen bearing/embrittling gases be limited to cylinders with the "H" mark. However, steel cylinders bearing an "H" mark are suitable for use for all gases where a steel cylinder is specified as acceptable, excluding those gases that require a high grade stainless steel.

Confusion over the meaning of the "H" mark will adversely affect the acceptance of UN cylinders in the US market. We therefore request an official confirmation that cylinders with an "H" mark are not limited to hydrogen bearing/embrittling gas service.

Wesley D. Scott, PhD, PE  
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SP- N99

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