U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

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

JAN 16 2014

Mr. Christopher Adams
Manager, Regulatory Affairs
FIBA Technologies
P.O. Box 360
1535 Grafton Road
Millbury, MA 01527

Ref. No.: 13-0146

Dear Mr. Adams:

This is in response to your July 9, 2013 petition for rulemaking and your telephone conversation with a member of my staff discussing a change to the requalification requirements for UN pressure receptacles in accordance with the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you note that § 180.207(d)(1) requires each seamless steel UN pressure receptacle (defined as UN cylinders and UN tubes) to be requalified in accordance with ISO 6406, however ISO 6406 addresses only UN cylinders.

The HMR currently authorize the use of ISO 6406 to requalify UN refillable seamless steel cylinders and UN refillable seamless steel tubes. As noted in your letter, while ISO 6406 does not specifically address requalification of UN tubes, all of the elements associated with the periodic requalification of seamless steel UN tubes are addressed and would allow a proper requalification of a UN tube. We are aware that the current ISO 6406 has a limitation of 150 liters, which is substantially less than the maximum volume of a UN refillable seamless steel tube (3,000 liters). PHMSA participates in the ISO/TC58/SC4 working group considering revisions to that standard. Once that revision is complete, we may consider adopting the revised standard.

Until we adopt a revised standard that specifically addresses the requalification of UN refillable seamless steel tubes the currently adopted ISO 6406 may be used to requalify UN refillable seamless steel tubes (with a capacity greater than 150 liters) as permitted by § 180.207.

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

Sincerely,

Duane A. Pfund

Duane Pfund
International Standards Coordinator
Standards and Rulemaking Division

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QUALITY PRODUCTS-SERVICE

FIBA Petition to DOT for Rulemaking on Requalification of UN Refillable Seamless Steel Tubes

July 9, 2013

Leary
§180.207 (d)(1)
§171.8
Cylinders/Definitions
13-0146

Standards and Rulemaking Division
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
East Building, 1200 New Jersey Avenue, SE
Washington, DC 20590-0001

ATTN: PHH-10

To Whom It May Concern:

FIBA Technologies, Inc. (FIBA) is requesting to revise the U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR). To that end, we offer the following information in accordance with 49 CFR § 106.100(a), **Required information for a petition for rulemaking**:

(1) *A summary of proposed action and explanation of its purpose* –This petition proposes to revise Title 49 CFR Part 180 to include language that permits International Standard ISO 6406, *Gas cylinders – Seamless steel gas cylinders – Periodic inspection and testing* to be applied, as far as practical, to UN pressure receptacles of water capacity greater than 150 l.

(2) *Language proposed* – We propose that paragraph 49 CFR § 180.207(d)(1) pertaining to seamless steel UN pressure receptacles be revised as follows:

(1) Seamless steel: Each seamless steel UN cylinder must be requalified in accordance with ISO 6406. Each seamless steel UN tube, including MEGC's pressure receptacles, must also be requalified, as far as practical, to ISO 6406.

(No changes required to the last sentence of 49 CFR § 180.207(d)(1). In other words, continue to require UN cylinders with a tensile strength greater than or equal to 950 MPa must be requalified by UE.)

(3) *FIBA's interest in proposed action* –

- To correct an oversight in the current DOT regulations and ISO 6406.
- Currently, seamless transportable pressure receptacles with a water capacity exceeding 150 L but not more than 3,000 L (described in 49 CFR § 171.8 as UN tubes) are currently not addressed in ISO 6406, Second edition 2005-02-01.
- Yet, DOT regulations currently require that UN tubes be tested in accordance with ISO 6406.

(4) *Supporting information and arguments* – To support our petition we offer the following comments:

A. ISO members are currently working on ISO/WD 18119, which is basically a combination of ISO standards ISO 6406 and ISO 10461. The last sentence in the scope of this draft standard has been revised to say: "It also applies, as far as practical, to cylinders of less than 0,5 l water capacity and greater than 150 l."

B. It is unnecessary to write an ISO standard that is specific to UN tubes. All elements associated with the periodic inspection and testing (requalification) of UN tubes is covered by ISO 6406. This is why ISO members are revising the standard such that it addresses all sizes of steel and aluminium alloy gas cylinders.

C. There are parts of ISO 6406 that are applicable only to small cylinders or cylinders with bottoms. Those parts are clearly not applicable to UN tubes. The inspection and testing requirements of ISO 6406 that are applicable to UN tubes are clear. There will be no confusion on the part of requalifiers as to what sections of ISO 6406 are applicable to UN tubes.

D. Finally, ADR (2009) states in ***NOTE 2:*** Section 6.2.1.6.1: "With the agreement of the competent authority, the hydraulic pressure test of cylinders of tubes may be replaced by an equivalent method based on acoustic emission testing, ultrasonic examination or a combination of acoustic emission testing and ultrasonic examination." This statement indicates that the European community is aware that there's a distinction to be made between cylinders and tubes. Unfortunately, ADR can only reference ISO 6406 for seamless steel pressure receptacles.

(5) *Specific cases supporting the need for proposed action* – Specific cases supporting the need for the proposed action are listed below:

A. As pointed out in item (4) A. above, members of ISO/WD 18119 recognized this oversight and they are working on writing a new ISO standard that will encompass all sizes of seamless steel and seamless aluminium alloy gas cylinders and all aspects of the requalification (i.e. periodic inspection and testing) of such cylinders.

B. Without such a change, UN tubes will only be able to be requalified by special permits. It is not in the best interest of the DOT and the public to require a special permit to be written when ISO 6406 is perfectly adequate.
C. FIBA is aware that European Norm EN 1968, *Transportable gas cylinders – Periodic inspection and testing of seamless steel gas cylinders*, also intends to address this issue in the next revision by including in Section 1, Scope, the following note: "NOTE As far as practicable, this standard may also be applied to cylinders of less than 0,5 l water capacity and for tubes up to 3 000 l water capacity."

(6) The impact of this proposed action is not substantial with regard to costs and, therefore:
A. There will be no significant cost to society in general or any particular, identifiable groups within society in general. The benefits are a safer compressed gas industry without any significant additional costs.
B. This proposed action will have no direct effects on State, on the relationship between the Federal government and the States, and on the distribution of power and responsibilities among the various levels of government.
C. There will be no regulatory burden on small businesses, small organizations, small governmental jurisdictions and Indian tribes.
D. The additional recordkeeping requirements would be no greater than those required today by the US Department of Transportation and Transport Canada.
E. By adopting this proposal there will be no effect on the quality of the natural and social environments.

If the DOT agrees with this petition and supports making a change to the DOT regulations, we would also then like to take this opportunity to suggest that the DOT present an information document (INF paper) to the United Nations Committee of Experts on the Transport of Dangerous Goods to incorporate this provision into the UN model regulations until such time as either a revised ISO 6406 version or the new ISO 18119 can be incorporated because it may take several years for that to occur.

I trust that I have provided you with all the information you need. Please do not hesitate to contact me with any questions or needs for additional information.

Very truly yours,

Christopher R. Adams
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