



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

JUL 10 2003

400 Seventh St., S.W.
Washington, D.C. 20590

Ms. Robin J. Eddy Bolte
Safety and Regulatory Compliance Manager
Allied Universal Corp.
3901 N.W. 115th Avenue
Miami, FL 33178

Ref. No. 02-0080

Dear Ms. Bolte:

This is in response to your letter and subsequent telephone conversation with Sandra Webb of my staff requesting clarification of the requirements for marking the tare weight on a cylinder under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you state that your company is trying to determine the proper procedure for handling DOT Specification 3A and 3AA cylinders that show distinct loss in weight, between five (5) and nine (9) percent of the original stamped tare weight. I regret the delay in responding to your letter and hope it has not caused you any inconvenience.

The requirement previously contained in § 173.34(c) was recently moved to § 173.301(b) in a final rule published on August 8, 2002, under RSPA Docket HM-220D; 67 FR 51652. Your specific questions are paraphrased and answered below.

- Q1:** If the cylinder passes inspection and requalification, may our hydrostatic testers or third party hydrostatic testing service mark the new tare weight to the right of the original tare weight on the cylinder?
- A1:** The answer is yes. Additional information may be marked on the cylinder provided it does not affect the required markings prescribed in § 178.35(f) and the applicable specification as specified in § 173.301(b). However, we recommend that you stamp one diagonal line through the obsolete, original tare weight(s), if present, so that it is still legible for future reference.
- Q2:** Is it true that a cylinder with a five to nine percent tare weight lost passing inspection and hydrostatic testing may only be used for one year from the date of that testing, or may it be used until additional inspection and hydrostatic testing is warranted or it fails the ten percent tare weight lost rule?
- A2:** With the exception of DOT Specification 3HT cylinders (see § 173.302a(a)(2) as specified under Docket HM-220D (67 FR 51626; 51646; August 8, 2002)) or cylinders manufactured under exemption, DOT cylinders do not have a specified service life. Therefore, if the cylinder

conforms to the applicable requirements specified in Part 173 and Part 180 of the HMR, it may be used in the transportation of hazardous materials.

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

Sincerely,



Susan Gorsky
Senior Transportation Regulations Specialist
Office of Hazardous Materials Standards



ALLIED UNIVERSAL CORP., 3901 N.W. 116th Avenue, Miami, Florida 33178

Webb
§173.34
Cylinders

305-888-2623
Fax 305-885-4671

Mr. Edward Mazullo
Director for Hazardous Materials Standards
U.S. Department of Transportation
400 Seventh Street, S.W., DHM-10
Washington, D.C. 20590-0001

02-0080

March 1, 2002

Subject: Interpretation, Cylinder Requalification

Dear Mr. Mazullo:

My company is trying to determine the proper procedure for handling DOT Specification 3A and 3AA cylinders that show a distinct loss in weight, between five and nine percent, from their original stamped tare weight.

RSPA refers to Compressed Gas Association (CGA) Pamphlet C-6 in their regulations found at 49 CFR §173.34(e). Pamphlet C-6 states on page 6, section 3.2.1.1 (copy enclosed) that a cylinder with a tare weight lost of five percent or greater is required to be rejected for service. If the cylinder tare weight loss is ten percent or greater, Pamphlet C-6 and 49 CFR 173.34(e) both state that the cylinder must be condemned and removed from service. If the loss is five percent or greater, but not more than ten percent, the CGA Pamphlet states that the cylinder must be inspected and requalified by hydrostatic testing. Our questions are regarding cylinders that pass these inspections and requalifications.

1. If the cylinder passes inspection and requalification, may our hydrostatic testers or third party hydrostatic testing service mark the new tare weight to the right of the original tare weight on the cylinder? Our reason for requesting this ability to mark the cylinder with the new tare weight is due to the following safety concerns:
 - a) One, we do not want to overfill the cylinders; hence the reason for the new tare weight for our cylinder fillers, and,
 - b) Two, though the cylinder passed requalification, if the cylinder continues to lose weight, we need to know the original tare weight to make sure it is retested or condemned as indicated in the previous paragraph.
2. We were told that a cylinder with a tare weight loss of five percent, but not greater than nine percent, that passes requalification has a use life of one year from the date of requalification testing. One year from the date of the requalification testing the cylinder must be condemned, and removed from service. Is it true that a cylinder with a five to nine percent tare weight lost passing inspection and hydrostatic testing may only be used for one year from the date of that testing, or may it be used until additional inspection and hydrostatic testing is warranted or it fails the ten percent tare weight lost rule?

If you should have any questions, please call me at 800-437-8715, extension 183.

Thank you.

Sincerely,

Robin J. Eddy Bolte
Safety and Regulatory Compliance Manager
Allied Universal Corp.

2.2.6.3 Crevice Corrosion. Crevice corrosion occurs in the area of the intersection of the footing or heading with the cylinder. Fig. 4 is an example of crevice corrosion.

2.2.6.4 General Corrosion. General corrosion is that which covers considerable surface areas of the cylinder. It reduces the structural strength. It is often difficult to measure or estimate the depth of general corrosion because direct comparison with the original wall cannot always be made. General corrosion is often accompanied by pitting. This form of corrosion is shown in Figs. 5 and 6.

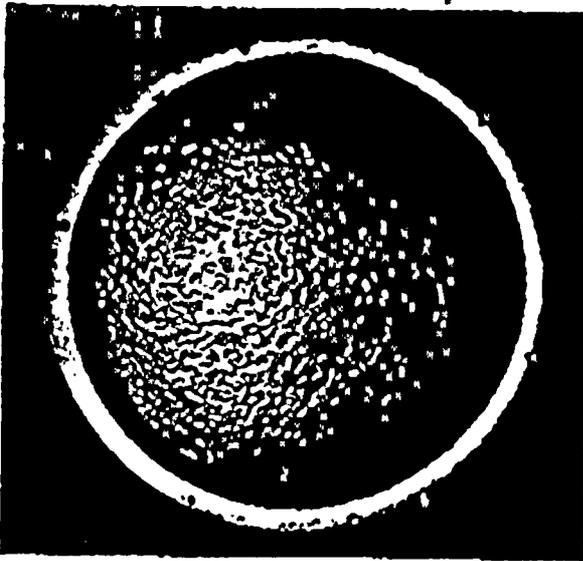


Fig. 5. General Corrosion with Pitting.

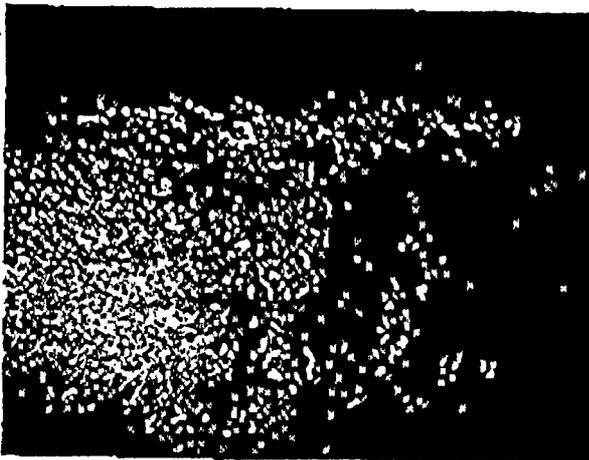


Fig. 6. General Corrosion with Pitting on Cylinder Wall.

2.2.7 Weld Defects. Cracks or flaws in weld areas reduce the structural strength of metal which may cause separation when pressurized.

3. LOW PRESSURE CYLINDERS EXEMPT FROM THE HYDROSTATIC TEST

This section covers cylinders exempt from hydrostatic retest requirements of the DOT by virtue of their exclusive use in certain non-corrosive gas service. They are not subject to internal corrosion and do not require internal shell inspection. If, due to unusual circumstances, cylinders of these types suffer internal corrosion, they should be inspected in accordance with the procedure in Section 4.

3.1 Preparation for Inspection. At the time of requalification, all rust, scale, caked paint, caked coatings, etc., shall be completely removed from the exterior surface so that the surface is adequately prepared for inspection.

3.2 Exterior Inspection. Cylinders shall be checked as outlined below for corrosion, general distortion, or any other defect that might indicate a weakness which would render them unfit for service.

3.2.1 Corrosion

3.2.1.1 Corrosion Limits. To fix corrosion limits for all types, designs, and sizes of cylinders, and include them in this standard is not practicable. Failure to meet any of the following four general rules is cause for condemning a cylinder.

(1) A cylinder shall be condemned when the tare weight is less than 90% of the original stamped tare weight. A cylinder shall be rejected when the tare weight is less than 95% of the original stamped tare weight. A rejected cylinder may be requalified in accordance with 49 CFR 173.34(e), by water jacket or by direct expansion. (1) When determining tare weight, be sure the cylinder is empty.

(2) A cylinder shall be condemned when the remaining wall in an area having isolated pitting only is less than one-third of the original minimum allowable wall thickness. Refer to Fig. 2.

(3) A cylinder shall be condemned when line or crevice corrosion on the cylinder is 3 inches (76.2 mm) in length or over and the remaining wall is less than three-fourths of the original minimum allowable wall thickness or when line or crevice corrosion is less than 3 inches (76.2 mm) in length and the remaining wall thickness is less than one-half the original minimum allowable wall thickness. Refer to Figs. 3 and 4.

ALLIED UNIVERSAL CORPORATION
3901 NW 115TH AVENUE, MIAMI, FL 33178-1859
PHONE: 800-437-8715/FAX: 305-885-4871

FACSIMILE TRANSMITTAL SHEET

TO: Edward Mazullo	FROM: Robin Poote		
COMPANY: US DOT / RSPA	DATE: 3-13-02		
FAX NUMBER: 202-336-3012	TOTAL NO. OF PAGES INCLUDING COVER: 3		
PHONE NUMBER: 202-366-8553	RE: Interpretation Request		
<input type="checkbox"/> URGENT	<input checked="" type="checkbox"/> FOR REVIEW	<input type="checkbox"/> PLEASE COMMENT	<input checked="" type="checkbox"/> PLEASE REPLY
NOTES/COMMENTS:			

Mr. Mazullo,

If you can not read this, please contact me. EPA sent us all a letter asking us not to mail anything to DC. To fax it, Fedex it, Courier Service it, but no mail.

Robin