APRIL 2001

SAFETY ALERT

Acetylene Cylinder Requalification

Reasons for Inspection

The inspection of acetylene cylinders is an important safety measure. It is intended to:

- Prevent accidents and incidents,
- Provide a safe working environment,
- Save lives,
- Protect property, and
- Safeguard the future of your company.

Background

In a 1991 rulemaking, the Research and Special Programs Administration (RSPA) amended the Hazardous Materials Regulations (HMR 49 CFR Parts 100-185) to ensure the safe transportation of acetylene through the detection of cylinder deficiencies. This rulemaking established standards for periodic requalification of acetylene cylinders, established a schedule for retesting and requalifying acetylene cylinders, and required cylinders to be visually inspected externally before each filling.

The Time is Now!

The first due date applies to cylinders manufactured before January 1, 1991. The shell of acetylene cylinders manufactured before January 1, 1991, must be requalified by visual inspection BEFORE January 1, 2001 and every ten years thereafter.

COURTESY OF COMPRESSED GAS ASSOCIATION

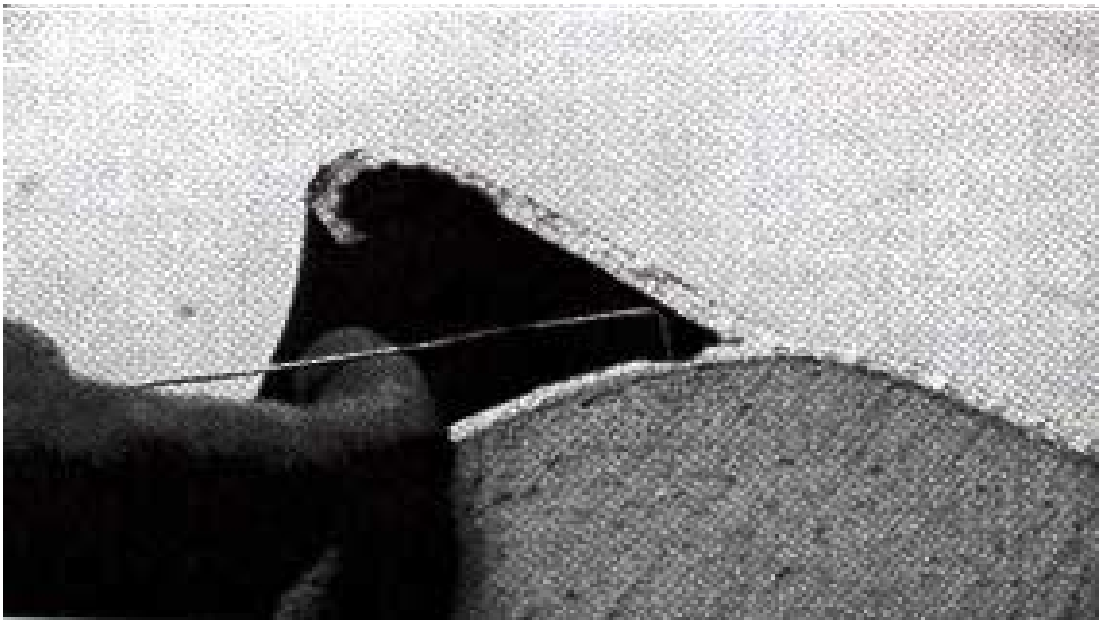
Typical Press-Fit Footring acetylene cylinder.

Who must Comply?

Acetylene cylinder owners, authorized requalification facilities, acetylene charging facilities and users of acetylene cylinders must comply. An acetylene cylinder that has not met the shell (visual inspection) requalification may not be charged or filled with a hazardous material and transported in commerce ***after January 1, 2001.***

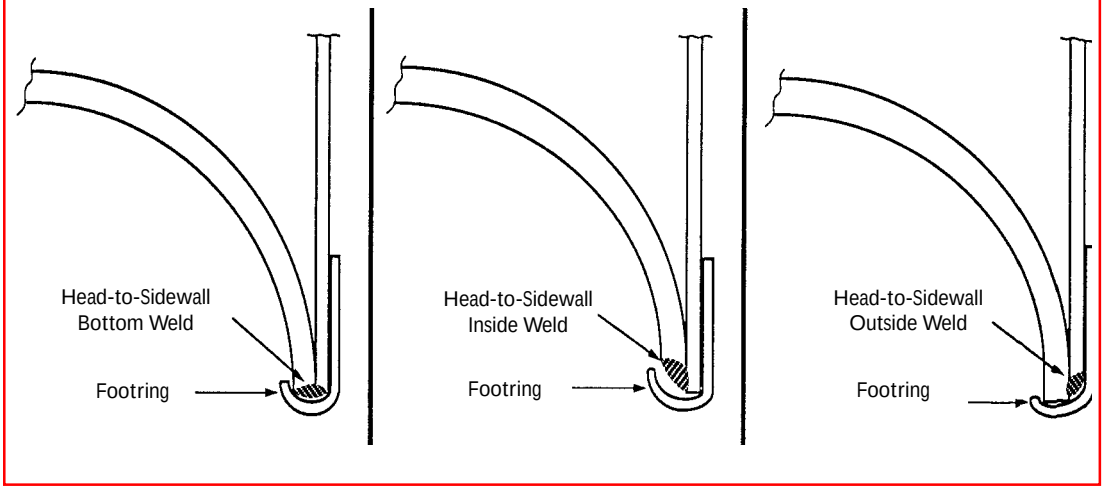
U.S. Department of Transportation

Research and Special Programs Administration



COURTESY OF COMPRESSED GAS ASSOCIATION

Crevice corrosion near the cylinder footring.



COURTESY OF COMPRESSED GAS ASSOCIATION

Illustration of potentially dangerous weld arrangements found in acetylene cylinders: bottom, inside, and outside welds.

How do you comply?

You may use registered acetylene requalification (retester) facilities to inspect your cylinders. RSPA's website lists these facilities (tester class "M") by identification number and state:

http://hazmat.dot.gov/files/approvals/hydro/hydro_retesters.htm

You may choose to do your own cylinder requalifications, however, this requires obtaining written DOT approval, specialized equipment, and trained qualified inspectors.

Inspection and Requalification

Acetylene cylinders must be requalified in accordance with Compressed Gas Association (CGA) Pamphlet C-13. CGA Pamphlet C-13 contains the requalification criteria for acetylene cylinder shells and fillers.

After the Inspection

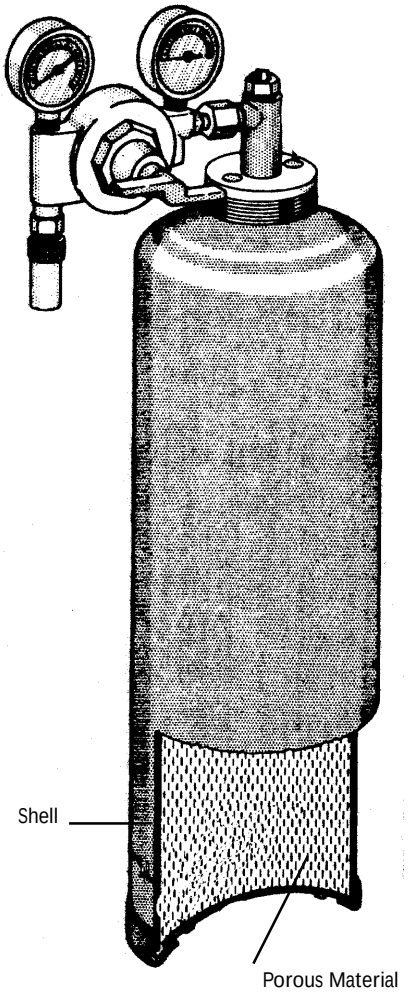
An acetylene cylinder that has successfully passed a shell or porous filler requalification must be marked by the DOT registered facility with the registered retester identification number. In addition, the cylinder must be marked to identify the type of requalification performed, for example, the letter “S” shall be used for shell requalification and the letter “F” for a porous filler requalification.

Planning Ahead

Requalification must be performed in accordance with the compliance schedule in the table below. An acetylene cylinders that is due for requalification **MAY NOT** be filled and offered for transportation in commerce.

It’s the Law...

Federal law provides for civil penalties up to $27,500 for each violation of the HMR. An individual who violates a provision of the HMR may be fined up to $250,000, be imprisoned for more than 5 years, or both; a business entity may be fined up to $500,000.



COURTESY OF ASM INTERNATIONAL, METALS HANDBOOK DESK EDITION (1985)

Typical acetylene cylinder shell and porous mass.

Date of Cylinder Manufacture	Shell (visual inspection) requalification		Porous filler requalification	
	Initial	Subsequent	Initial	Subsequent
Before January 1, 1991	Before January 1, 2001	10 years	Before January 1, 2011	Not required
On or after January 1, 1991	10 years*	10 years	3-20 years**	Not required

* Years from date of cylinder manufacture
** For cylinders manufactured on or after January 1, 1991, requalification of the porous filler must be performed no sooner than 3 years, and no later than 20 years, from the date of manufacture.

If you have questions or concerns regarding the safe transportation of acetylene cylinders, or the HMR or would like more information on becoming a registered cylinder retester, contact the Hazardous Materials Information Center:

800-HMR49-22 (800-467-4922)
(202)366-4488 (Local)
or write to:

U.S. Department of Transportation
Research and Special Programs Administration
Hazardous Materials Safety
Information Center (DHM-10)
400 Seventh Street, SW
Washington, DC 20590-0001

Training materials, fact sheets, newsletters and other safety related information is available from RSPA at:

(202) 366-2301
Fax (202) 366-7342

E-Mail:TRAINING@rspa.dot.gov

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

DHM-50
400 Seventh St., S.W.
Washington, DC 20590