Safety Management Services
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31 October 2014

Ms. Juliann Sum
Chief – D.O.S.H.
1515 Clay Street, Suite 1901
Oakland, CA 94612

Reference: Transporting Compressed Gas Cylinders By Vehicles

Dear Ms. Sum:

A debate has arisen about transporting oxygen and acetylene bottles on service trucks (also called a utility bed type trucks). The individuals debating the safety issues agree that both oxygen and acetylene cylinders (used for welding a cutting) need to have covers over the valves to prevent the gages from breaking and the compressed gases from escaping the cylinders. The disagreement comes about when discussing the use of the cylinder manufacturer's valve covers or using an after market cover (see the attached photo of a Snap-On Low Pressure cap). The safety issues are:

1. Can an after market cap, like the Snap-On Low Pressure cap, be used on acetylene cylinders (approximate pressure of 240 pounds per square inch gage)? Or should be cylinder manufacturer's valve cover be used?

Considerations: The acetylene cylinders have to meet Department of Transportation requirements. Does the valve cap have to be considered as a component of the original manufactured and tested cylinder? Or, can an after market valve cap be used?

2. Can an after market cap, like the Snap-On Low Pressure cap, be used on oxygen cylinders that have an internal pressure, when filled, of approximately 2,200 psig?

Considerations: The oxygen cylinders have to meet the Department of Transportation requirements. Does the valve cap have to be considered as a component of the original manufactured and tested cylinder? Or, can an after market valve cap be used?

3. Can the gages be left on the cylinders during transportation if an after

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market cap, like the Snap-On Low Pressure cap, is used to cover the valve stems/handles on the cylinders?

Consideration: The gages are connected to the valves by a tube and nut assembly. It is possible to break or snap off the tube between the gages and the connecting nut at the cylinder valve. In the event of an accident or the gages being struck during transportation, the connecting tube could break or snap. If the valves are not turned off, the acetylene, oxygen or other compressed gas could escape. In the case of flammable or combustible gases, an explosion and/or fire could ensue.

4. Is there a specific Cal/OSHA code or other code that Cal/OSHA would rely on that prohibits the use of after market valve covers, like the Snap-On Low Pressure cap?

   If the answer is yes, which code or codes would apply?

5. Could a company, contractor, municipality or other business entity be issued a violation for any of the conditions detailed in questions 1, 2 or 3?

   If the answer is yes, which code(s) and would there be a monetary fine involved?

Your response will be shared with fellow safety professionals and my clients.

Thank you for your time and courtesy.

Sincerely,

J. Robert Harrell
President


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