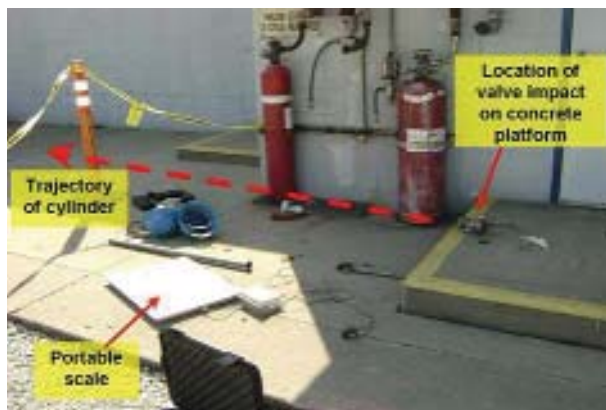


June 2008

Halon Cylinder Becomes a Rocket



A fire protection system using Halon (a liquefied gas fire extinguishing agent) was being inspected. As part of the system inspection, two employees were moving a Halon cylinder to be weighed on a portable scale. The cylinder was dropped and its top valve hit a concrete platform. The impact of the cylinder valve on the concrete caused the threads on the screw connection which held the valve on the cylinder to fail, resulting in complete separation of the valve from the cylinder. The cylinder's internal pressure was 600 psig (~41 bar). The combination of pressure and size of the cylinder hole caused the cylinder to discharge its contents rapidly, and it flew

through the air like a rocket! It went nearly 1/4 mile (0.4 km), over a tank farm and across two roads, before hitting a fence. Fortunately, there were no injuries, no significant equipment damage, and no process releases as a result of this incident.



Do You know?

- All compressed gas cylinders have the potential to become destructive missiles.
- Fire protection system cylinders may be built to fire extinguisher standards, and may not have a requirement for a protective cap over the top valve assembly for impact protection when handling. This may vary according to local regulations around the world.
- Fire protection system cylinders and other high-flow-rate cylinders, including liquefied gases like propylene used for torch-cutting, require larger flow openings than most compressed gas cylinders. Because of the larger openings, these high-flow-rate cylinders have greater thrust potential than standard compressed gas cylinders.

What Can You Do?

- Treat every cylinder as capable of becoming a projectile if dropped and the top valve sheared off.
- Follow compressed gas cylinder safe handling requirements for securing cylinders from falling, and using protective top valve caps, if they exist, for all cylinders when they are not in use.
- Be aware of any compressed gas cylinders in your facility which do not have provision for protective caps, and handle them with particular care.
- The inspection and maintenance of Halon and other fixed fire protection systems is often provided by specialized and qualified outside contractors. Ensure that your contractors handle cylinders safely.

Handle compressed gas cylinders with care!

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For more information, circle 103 on p. 79.