

SAFETY MEETING TOPIC: Compressed Gas Safety

OSHA Standard: 1910.101 Handling of Compressed Gas Cylinders

Mishandled cylinders may rupture violently, release their hazardous contents or become dangerous projectiles. If a neck of a pressurized cylinder should be accidentally broken off, the energy released would be sufficient to propel the cylinder to over three-quarters of a mile in height. A standard 250 cubic foot cylinder pressurized to 2,500 PSIG can become a rocket attaining a speed of over 30 miles per hour in a fraction of a second after venting from the broken cylinder connection.

Moving Cylinders

- Use a cylinder cart and secure cylinders with a chain.
- Don't use the protective valve caps for moving or lifting cylinders.
- Don't drop a cylinder, or permit them to strike each other violently or be handled roughly.
- Unless cylinders are secured on a special cart, regulators shall be removed, valves closed and protective valve caps in place before cylinders are moved.

Use of Cylinders

- Be sure all connections are tight. Use soapy water to locate leaks.
- Keep cylinders valves, regulators, couplings, hose and apparatus clean and free of oil and grease.
- Keep cylinders away from open flames and sources of heat. Propane cylinders should be at least 8 feet away from the portable heaters they supply.
- Safety devices and valves shall not be tampered with, nor repairs attempted.
- Use flashback arrestors and reverse-flow check valves to prevent flashback when using oxy-fuel systems.
- Regulators shall be removed when moving cylinders, when work is completed, and when cylinders are empty.
- Cylinders shall be used and stored in an upright position.
- The cylinder valve should always be opened slowly. Always stand away from the face and back of the gauge when opening the cylinder valve.
- When a special wrench is required to open a cylinder or manifold valve, the wrench shall be left in place on the valve stem when in use; this precaution is taken so the gas supply can be shut off quickly in case of an emergency; and that nothing shall be placed on top of a cylinder that may damage the safety device or interfere with the quick closing of the valve.

- Fire extinguishing equipment should be readily available when combustible materials can be exposed to welding or cutting operations using compressed cylinder gases.
- Separate incompatible gases by 20-feet if not used for more than 24-hours.
- Always store with regulators off and caps on.

Things Not To Do:

- Never roll a cylinder to move it.
- Never carry a cylinder by the valve.
- Never leave an open cylinder unattended.
- Never leave a cylinder unsecured.
- Never force improper attachments on to the wrong cylinder.
- Never grease or oil the regulator, valve, or fittings of an oxygen cylinder.
- Never refill a cylinder.
- Never use a flame to locate gas leaks.
- Never attempt to mix gases in a cylinder.
- Never discard pressurized cylinders in the normal trash.

