Policy Statement

Compressed gases and cryogenic liquids are commonplace in our research and maintenance operations. Even though they have become ubiquitous, serious accidents can occur. Knowing the specific properties of a gas is essential for the safe handling and storing of a gas cylinder.

Compressed gases, including liquefied compressed gases, are considered hazardous by virtue of compression; all compressed gases contain potential energy. In addition, some compressed gases asphyxiate (by displacement of air), while others may be toxic, corrosive, flammable, oxidizing, or highly reactive. It cannot be overstated: know the properties of the gases with which you are working.

Applicable Campus:

All University of Colorado Denver | Anschutz Medical Campus

Purpose

To establish a policy for safe handling and storage of compressed gas cylinders on campus property.

Scope

The policy covers all campus departments and staff.

Procedures

Compressed gas cylinders must be secured from falling, as required by the Fire Code. The method of securing the cylinder is not specified in the code, therefore straps, chains, and ropes may be used, as may any commercially available holding systems.

Guidelines for safe handling and storage of compressed gas cylinders

- Check to see that the cylinder contents are identified on the bottle of a tag on the cylinder valve. Do not rely on color-coding, as there is no standard color-coding system. Refer to the Material Safety Data Sheet (MSDS) for information specific to the gas.
- Store cylinders in a well-ventilated, fire resistant, dry area, which is free from excessive heat and sources of ignition. Store cylinders away from exits, stairways, elevators and other high traffic areas.
• Secure all cylinders, empty and full, to prevent them from being knocked over or falling. When the cylinder is not in use, keep the correct valve protection cap on the gas cylinder.
• Perform leak tests of compressed gas systems prior to full operation.
• Do not handle cylinders with oily gloves or hands. This is particularly important with oxygen or other oxidizers. Cylinders should only be moved with a hand truck (or other device) specifically designed for transporting cylinders.
• Keep empty cylinders separate from full gas cylinders. Clearly mark empty cylinders with the letters “MT.” This procedure will reduce the likelihood of connecting an empty cylinder to a pressurized system, which will result with a flow of foreign material into the cylinder.
• Flammable gas cylinders should always be stored at least 20 feet away from oxygen and other oxidizers or separated by an approved fire barrier. (This does not apply to individual welding carts.)
• Do not store incompatible gases together.
• Record the date cylinders are received and use the oldest stock first. Storing corrosive gas cylinders longer than six months may produce sticking problems in the valve. Take an inventory and reduce quantities of cylinders to the necessary quantity.
• Anticipate the unexpected. Prepare an emergency plan outlining the steps to be taken in the event of an accidental release, such as a leak.

For advice or assistance with fire prevention efforts, contact the Fire & Life Safety Officer at 303 724-0293.

Prepared by:

Wayne Blubaugh, MPA
Fire & Life Safety Officer, Facilities Management

Approved by:

David C. Turnquist, PE
Associate Vice Chancellor, Facilities Management

References:
• 2009 ed. International Fire Code
• Campus Authority having Jurisdiction Policy