

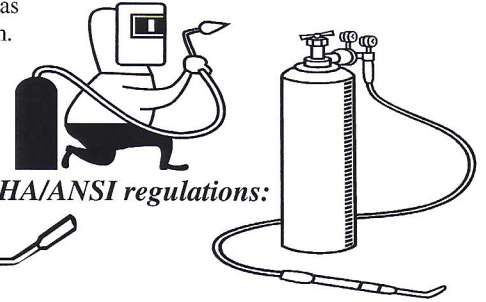
Job Name: _____ Job Site Location: _____

Date: _____ Start Time: _____ Finish Time: _____ Foreman/Supervisor: _____

Topic 134: Compressed Gas Cylinders

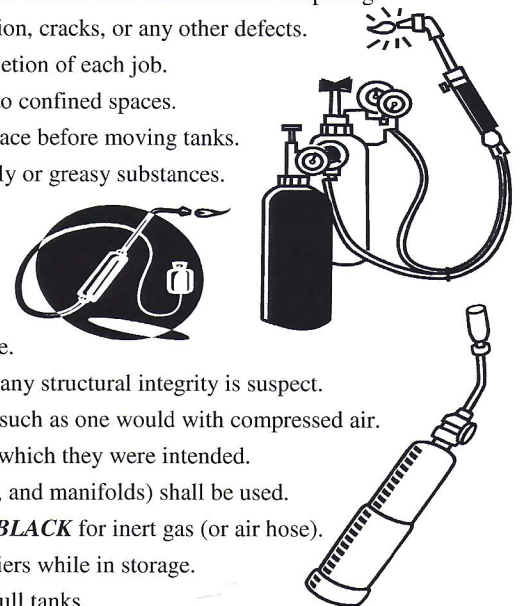
Introduction: Compressed Gas Cylinders (CGCs), sometimes called gas bottles or tanks, are portable, high-pressure storage vessels used for any type of gas that can be used under pressure for any given application. CGCs come in many shapes and sizes, must be color coded and labeled, and require periodic re-certification. If used properly, they are valuable in handling small amounts of fuel gas such as acetylene or propane, refrigerants, oxygen, toxic gas such as chlorine, or inert gases like argon or helium.

Every year, many serious injuries are attributed to careless work practices involving CGCs. The larger CGCs can fall over and cause crushing injuries if not secured properly, and the fuel gas units can cause explosion and fire if faulty regulators, valves, or hoses are used. Inert gas can displace oxygen in the atmosphere and cause asphyxia, and toxic gas leaks can cause poisoning.



For safe handling, use, and storage of Compressed Gas Cylinders, follow these OSHA/ANSI regulations:

- Valve caps must be installed when CGC is not in use.
- CGCs must be protected from external heat sources.
- CGCs must be legibly marked to clearly identify the gas contained.
- CGCs must be secured in an upright position and located and stored in a manner that prevents hazards of tipping, falling, or rolling.
- CGCs must be stored where they will not be damaged by passing or falling objects, and must be secure from unauthorized tampering.
- Gas cylinders, include the bottom, must be checked periodically for corrosion, general distortion, cracks, or any other defects.
- CGC valves must be closed off before a cylinder is moved, when it is empty, and at the completion of each job.
- Make certain that cylinders containing oxygen, acetylene, or other fuel gases are not taken into confined spaces.
- Unless CGCs are secured in a tank dolly, regulators must be removed and valve caps put in place before moving tanks.
- Cylinders, cylinder valves, couplings, regulators, hoses, and apparatus must be kept free of oily or greasy substances.
- CGCs must be kept away from stairways, gangways, and elevators.
- Using CGCs as rollers or supports is prohibited.
- Gas cylinders must be kept far enough away from hot operations so that sparks, flames, or slag will not reach them; if impractical, fire resistant heat shields must be utilized.
- If a special valve wrench is needed, it must be left in position on valve while cylinder is in use.
- CGC regulators, hoses, and torches must be carefully inspected and removed from service if any structural integrity is suspect.
- The use of bottled oxygen is prohibited for ventilation purposes, comfort cooling, or blowing such as one would with compressed air.
- Pressure-reducing regulators and manifolds must only be used for the gas and pressures for which they were intended.
- Only approved apparatus (torches, regulators, pressure-reducing valves, acetylene generators, and manifolds) shall be used.
- Color-coded hoses must be used: RED to identify fuel gas, GREEN to identify oxygen, and BLACK for inert gas (or air hose).
- Fuel gas cylinders and oxygen cylinders must be separated by distance and fire resistant barriers while in storage.
- Empty CGCs must be appropriately marked, have their valves closed, and be separated from full tanks.



Conclusion: Safe work practices must be observed when using Compressed Gas Cylinders. When using fuel-gases, the risk of explosion or fire must compel workers to pay careful attention to the processes of their hot operations. Thoughtful application of these regulations helps to keep the work-zone safe and free of hazards associated with Compressed Gas Cylinders.

Work Site Review

Work-Site Hazards and Safety Suggestions: _____

Personnel Safety Violations: _____

Material Safety Data Sheets Reviewed: _____ (Name of Chemical)

Employee Signatures: _____
(My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.