

APPENDIX 9.2A Special Gases

Poison Gases

1. Persons handling and using poison gases shall have available acceptable escape respirators, approved by the ES&H Division, in close proximity to the work area. All such persons shall receive approved training in the use of this equipment (see Section 8, Chapter 7).
2. Poison gases shall be used only with the approval of the ES&H Division and after a hazard analysis has been completed by the Industrial Hygiene Section.
3. Chlorine - As indicated above, compressed gas cylinders shall not be stored or used at temperatures exceeding 51 °C (124 °F). This is particularly important in the case of chlorine cylinders as metal plugs of these cylinders fuse at 74 °C (165 °F). Care must be exercised to ensure cylinders are not exposed to steam, hot water, etc., which would produce temperatures in excess of 74 °C (165 °F).

Other Gases

1. Acetylene
 - a. Acetylene shall be used only with a pressure-regulating valve and gauge with pressures not exceeding 15 PSIG.
 - b. An acetylene valve shall not be turned more than one and one-half turns on the spindle.
 - c. If a wrench is required to open an acetylene valve, it shall be left on the cylinder-valve stem during use.
 - d. Acetylene cylinders shall be stored and used only in an upright position.

2. Pressurized Liquid Oxygen, Nitrogen, and Argon
 - a. DOT cylinders containing these gases must be transported, stored, and used in an upright position to permit venting of the vapor to maintain safe internal pressure (for details, see Section 9, Chapter 7, "Cryogenic Safety").
 3. Oxygen - Oxygen cylinders shall not be stored within 20 feet of highly combustible material, particularly oil or grease, as oil and grease in the presence of oxygen may ignite violently.
 - a. Oil, grease, or other combustible material shall not come into contact with valves, regulators, gauges, or any fittings used with oxygen.
 - b. Such cylinders should never be handled with oily hands or gloves.
 - c. Oxygen shall never be used as a substitute for compressed air.