

# Industrial Gases

## Toolbox Talk



# Classification of Gas Cylinders

- Flammable Gases
- Oxygen and Oxidizing Gases
- Acid and Alkaline Gases
- Highly Toxic Gases
- Cryogenic Liquefied Gases
- Inert Gases

# Handing of Compressed Gas Cylinders

- Move cylinders using a suitable hand truck or cart.
- Leave the valve protection cap and valve seal outlet in place until the cylinder has been secured in place and is ready to be used.
- Secure cylinders when in storage, transit, or use.
- When returning cylinders to the supplier, properly close the cylinder valve, replace and secure any valve outlet seals and properly install the cylinder cap.



# Handing of Compressed Gas Cylinders

- 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 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 gasses in a cylinder

# Special Precautions

## Special Precautions for a Flammable Gas

- Cylinders of flammable gas must be stored away from flammable liquids, combustible materials, oxidizers, open flames, sparks and other sources of heat or ignition.

## Special Precautions for an Oxidizing Gas

- Do not use oily hands or gloves when handling cylinders. The reaction between oxygen and hydrocarbons can be violent, even when small quantities are involved.

## Special Precautions for a Corrosive Gas

- Metals become brittle when used in corrosive gas service, check equipment and lines frequently for leaks.



# Safe use of Compressed Gas Cylinders

- **Only** properly trained personnel should handle/use compressed gas cylinders
- Always use the proper regulator for the gas in the cylinder
- Do not allow oil or grease to come in contact with cylinders or valves
- Attach the regulator securely before opening the valve
- Open the cylinder valves slowly, stand to the side of regulator when opening a valve
- Do not attempt to repair the cylinder valves while a cylinder contains gas pressure

# OXYGEN & OIL/GREASE DON'T MIX



Supplied By:

For additional information, see CGA publication P-1, "Safe Handling of Compressed Gas in Containers," which is referenced in OSHA's General Industry Standards.



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# Malpractices

Storage of combustible materials (in this case flammable) under a staircase, not to mention the installation of a Fire Hose as well as other fire-fighting equipment in a semi-accessible area.



Maintenance technician grinding and hot metal debris are ejected towards the oxygen/acetylene bottle assembly.

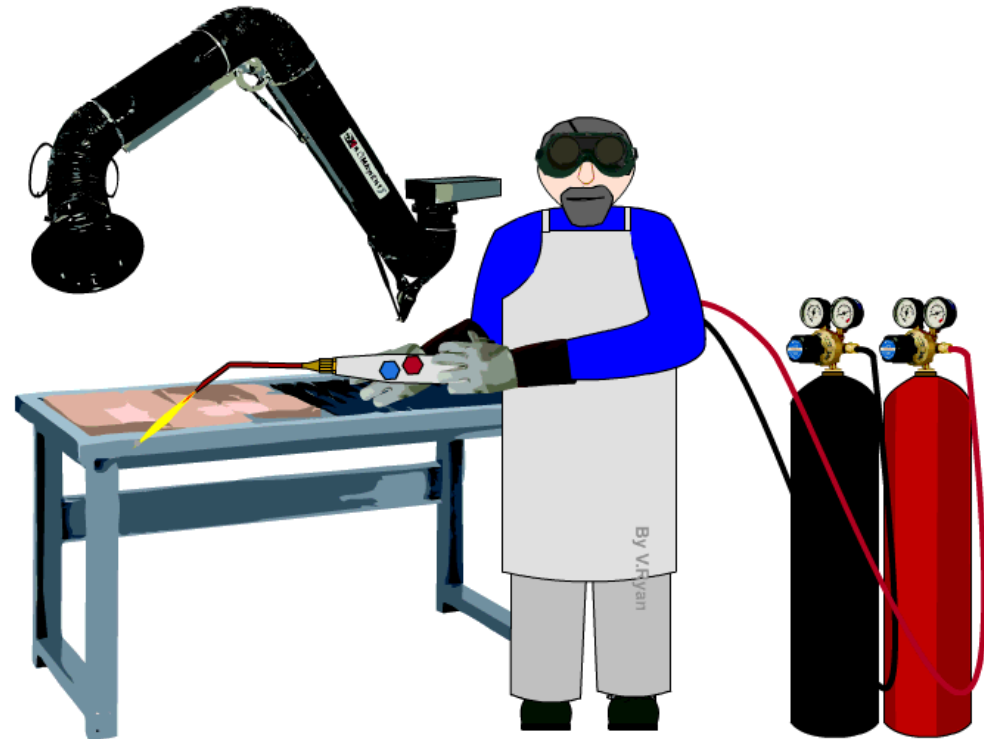




# Safety Checklist for Getting Started

*The necessary safety equipment you need are :*

- Proper eye Protection
- Appropriate gloves
- Clothing free of grease & oil
- Clean Work Area
- Fire extinguisher



# BIBLIOGRAPHY

- *Environmental Health & Safety Chemical Safety Division University of Texas Health Science Center at San Antonio*
- *Industrial gases in Petrochemical Processing: Chemical industries*
- *Handbook of Compressed Gases, Compressed Gas Association. Inc*

***ANY QUESTIONS?***

***THANKS FOR YOUR  
PARTICIPATION!!!***