

Oxyacetylene Hazards

Many workers don't fully realize the serious hazards of oxyacetylene. That doesn't necessarily mean these people aren't safety conscious, or are careless in their work. The hazards of gas welding are not always visually obvious, and therefore are not always appreciated. Even "old-timers" can become complacent, but this attitude can be very dangerous.

Oxygen is commonly stored at pressures near 2,000 psi, a huge amount of stored energy. Whenever any compressed gas cylinder is not in use, remove its regulator, and replace the valve cap, which is the best way to protect the cylinder valve from damage.

Always secure every cylinder in the upright position. This helps prevent a cylinder from being accidentally knocked over and damaged. If a cylinder's valve stem were to be sheared off in a fall, the stored energy can turn the cylinder into an unguided missile shooting across the shop or yard, destroying anything in its path.

Acetylene is an extremely unstable gas. It has a very wide explosive range and can be dangerously explosive at pressures above 15 psi—that's why acetylene must never be used at hose pressures greater than 15 psi. In all cases use the proper pressure for the system being used as the actual safe working pressure may be well below 15psi.

Oxygen placed under high pressure can erupt in flame or explode if it comes into contact with oil or grease. Never use oil or grease on any gas welding apparatus, including cylinder caps. Keep the torch clean and free of grease. Don't change cylinders or regulator valves unless you have clean hands. Just a little on your hands could cause an unfortunate explosion.

Always close down cylinder valves when you are through working. This includes when you take a break and go to lunch. Even a pinhole leak in the hose could allow gas to accumulate, creating the potential for fire or explosion.

When opening regulator valves, turn them slowly and stand to one side. If oxygen and acetylene were to mix inside the regulator under pressure, an explosion could result. The explosion could be a minor "pop" or it could destroy the regulator and injure the operator.

Regularly inspect the gauges to make sure they are in proper working order to prevent possible malfunctions, and ensure accurate gauge settings. Any damaged or inoperable gauges should be repaired or replaced before use.

Never use oxygen to ventilate a confined or enclosed space. An oxygen enriched confined environment creates a serious fire and explosion hazard.

These are just a few of the hazards associated with welding operations. There are others that all torch users should know. Know all the hazards. Follow all safety procedures for your work.

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