## ENVIRONMENTAL HEALTH & SAFETY

## Safety Instruction

## **Welding and Burning**

- All welding, cutting, and burning shall be performed in the shop area whenever possible. For work performed in other areas a
  fire extinguisher stand-by is required. In addition, sufficient ventilation must be provided. Do not weld in any area unless you
  are sure it is safe to do so. Make sure that you know exactly how to contact the closest fire department before welding or
  cutting is started.
- Do not weld, burn, or braze without appropriate eye protection. Be sure that co-workers wear equivalent protection. Provide for the safety of others who could be exposed to sparks or heat. A light resistant shield should be provided whenever bystanders may be visually exposed to the arc.
- Do not perform welding or burning operations unless you are wearing appropriate protective clothing.
- Do not weld galvanized pipe or burn lead unless you are using a forced air ventilation system, or are wearing approved respiratory equipment.
- Never use oxygen as a substitute for compressed air. Do not use oil on gauges or regulators for oxidizing gases. Oxygen under pressure reacts violently with oil or grease.
- Never use oxygen or acetylene from a cylinder without a reduction of pressure through a suitable pressure regulator.
- Pressure adjusting screws on regulators shall always be FULLY RELEASED BEFORE the regulator is attached to a cylinder. Always open the valves on cylinders slowly. Do not stand in front of pressure regulator gauge faces when opening cylinder valves.
- Do not strike valves with tools, or use excessive force in making connections.
- Do not interchange acetylene or oxygen regulators or equipment.
- Avoid mixtures of acetylene and oxygen or air prior to use except at a standard torch.
- Do not open an acetylene cylinder more than 1 and 1/2 turns of the valve.
- Cylinders not provided with fixed handwheel valves shall have keys or handles provided on valve stems at all times when cylinders are in use.
- Do not use recessed tops of acetylene cylinders as a resting place for tools or other articles, and do not allow the recess to fill with water.
- Never support work on compressed gas cylinders or other containers.
- Cylinders should not be dropped, bumped violently, skidded or rolled horizontally. Compressed gas cylinders are high pressure vessels and should be handled accordingly.
- Acetylene cylinders should be stored and used with valve end up, never horizontally.
- Cylinders shall always be secured by chains or suitable metal keepers.
- Do not store cylinders in direct sun, or in boiler or furnace rooms.
- Cylinders shall not be transported except in an approved welding cart. Be sure protective cap is in place when cylinders are moved or transported.
- When cylinders must be handled by a crane or hoist, they should be carried in a cradle rather than in a sling. Extreme care should be exercised so that they are not dropped.
- Do not place welding cable over steam lines or moving machinery, or on stairs or across traffic aisles unless protection and appropriate warning devices are provided.
- Be sure electric welding machines are electrically grounded.
- Try to prevent sparks from falling upon persons, cylinders, or hoses.
- Do not weld or burn on any container that has held a toxic or flammable material. Such work requires clearly outlined purging and cleaning procedures.
- Do not weld, burn, or heat any closed tank, container or pipeline which is under pressure. This is extremely dangerous.
- Do not weld or burn in areas where spray painting is being performed.
- Welding, cutting, or burning shall not be performed in tanks or other confined space without adequate ventilation that will keep the air free of toxic and flammable gases.
- All torches shall be equipped with flashback protection.

Contact EHS: safety@oregonstate.edu

oregonstate.edu/ehs/ 541 • 73**7 • 2273**