SAFETY AWARENESS

Brief Topic Safety Refresher Training For Associates

2024

Welding and Cutting at the Work Site

Welding and cutting tasks are dangerous, especially when working on a construction site. As your surroundings are constantly changing, it is important to keep safety top of mind.

Prevention and Protection

To avoid injuries on the job, consider these safety recommendations:

- Always check for fire hazards before you start welding. Wood, paper, and other flammable materials should be removed from the area. Flammable liquids should be removed as well. Never weld or cut in areas with a lot of trees or dry grasses.
- Clean away any debris on the floor or ground before welding over it. Then cover the ground or floor with metal or some other material that will not burn. It may also be a good idea to wet the floor or ground, though this can cause an added shock hazard. Guard against these hazards as necessary.
- Seal cracks so that sparks or slag cannot fall through them, and never allow these hot materials to fall into machine pits.
- If you must weld near combustible materials, a fire extinguisher, pail of water, fire hose or a pail of sand should be at hand. It may be necessary to have a worker stand by with a fire extinguisher to put out sparks as well.
- If you are welding or cutting a tank or drum containing flammable liquids or gas, do not start your operation until an approved test shows that there is no dangerous vapor present. Do not rely on another employee's word that the tank or drum was tested previously; insist on a new test before you start your work.
- If you're working in a confined space at the worksite, make sure your work area is properly ventilated. Many welding and cutting operations produce fumes that are harmful in heavy concentrations, and good ventilation is one of the best methods of protecting yourself against this hazard. Utilize special ventilating equipment, if necessary.
- Wear face and eye protection such as goggles and a helmet to protect against hazards. Workers dealing with metal, chipping and cleaning should always have their helmets lowered to prevent throw particles of metal from coming into the eyes. Eye protection, such as goggles, are worn to protect against sparks, slag and molten metal, and flash burns caused by radiation from the welding equipment.

General Steps for Cutting with an Oxygen/Acetylene Torch:

- When attaching gauges to cylinders, use care not to over tighten them.
- Generally, the desired pressure for the acetylene gauge should never exceed 7-8 pounds unless a heating tip is used.
- The desired pressure for the oxygen gauge should not exceed 35-40 pounds up to a number 2 tip. Increase about 10 pounds per size number increase.
- Never use a cigarette lighter to light a torch, ONLY USE A STRIKER

Cutting and Welding Fires are Usually Caused by One of Three Things:

- 1. Sparks and Slag: can fall through cracks or openings in floors, under doors, on combustible material or on flammable liquids. Sparks can fly 35 feet horizontally, may smolder in cracks with fire breaking out after the end of the shift.
- 2. Metal: being cut or welded can transmit heat by conduction or radiation and start a fire in adjacent or nearby combustibles.
- 3. Torch: the cutting torch accidentally coming close to, or in contact with, combustible material can be a ready source of ignition.

Handling of Cylinders:

- Avoid dragging or sliding cylinders, even for short distances. They should be moved using a suitable hand truck. Never lift them over your shoulder or otherwise carried by hand.
- Never drop cylinders or permit them to strike each other violently.
- Do not remove the product identification label or change the cylinder color.
- When returning empty cylinders, close the valve before shipment, leaving some positive pressure in the cylinder. Replace all cylinder caps when returning the cylinder to storage.

Storage of Cylinders:

- Always store cylinders in the upright position & secured in place. Cylinders may be stored in the open, but should be protected from dampness of the ground to prevent rusting.
- Smoking or open flames are prohibited in gas cylinder storage areas. Make sure a sign is in place to inform all personnel.
- Oxygen cylinder storage must be separated from flammable gas storage areas or combustibles by at least 20 feet or by a 5' non-combustible wall.

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