Hot Work Safety



Safety Talk

What's at Stake?

Hot work is a leading cause of workplace fires. A job is considered "hot" when it produces sparks, flame or heat, especially if it is done in flammable environments. Hot work includes welding, grinding, soldering, drilling, cutting and brazing; workers performing these activities are exposed to fire risks as well.

What's the Danger?

- Hot work presents many dangers, but the most significant ones are from fires and explosions and toxic fumes.
    - Fires and explosions resulting from hot work can cause burn injuries, hearing damage, and death.
    - Recommended safety measures start with a thorough hazard assessment to identify risks, followed by safe work procedures.
    - Important factors to be considered are the possibilities of fire in the work environment and expected types of fire.
    - A trained "fire watch" whose sole responsibility is to watch out for fires and take necessary precautions must be present with a functioning fire extinguisher and gas monitor
- Hot work also produces hazardous fumes and substances.
    - These fumes come from welding, burning, or evaporation of fuel, such as gasoline.
    - They are toxic and prolonged exposure to them causes cancer; brain, reproductive and nerve damage, and suffocation caused by low oxygen levels.
    - Protection from them includes air monitoring, reduced exposure time, exhaust ventilation, respirators and health monitoring.

How to Protect Yourself

Do

- Always, wear the right safety gear when welding, cutting or grinding.
    - Personal protective equipment worn during hot work should include eye

protection, hearing protection, heat-resistant clothing, safety boots and gloves made of leather or other flameproof material.
- Only weld in well-ventilated areas.
- Put up warning signs and barriers to keep others a safe distance from hot work operations to prevent them from being burned or injured
- Keep aisles and stairways clear of cables and equipment.
- Always use a qualified fire watch and a working fire extinguisher.
- The hot work area should be monitored for flammable and combustible gases.
    - A gas detector should be used.
    - Stop work immediately if a flammable or combustible gas exceeds 10 percent of its lower explosive limit.
- Use respiratory protection to protect against toxic chemicals and gases and low oxygen levels.

Don’t

- Don’t weld, cut, or grind near flammable or combustible materials, liquids, vapors or dust.
    - Instead, relocate work and equipment outside of the hazardous areas.
    - When welding or cutting is performed in locations where anything greater than a minor fire might occur, assign additional personnel as “fire watchers” to guard against fire.
- Never work in confined spaces that have not been atmosphere-tested or begin hot work until the work area has been tested for flammable gas.
- Don’t use equipment that is not in good condition. Inspect for loose connections and bare wires or cables before operating any machinery
    - Remember, don’t store cylinders of oxygen within 20-feet of cylinders containing flammable gases.

Finally, know the symptoms of metal fume fever, which is caused by breathing welding fumes. The symptoms are listed below and must be reported immediately.

- Metallic taste in the mouth or dryness of throat and mouth.
- Weakness, joint and muscle pains.
- Fever, chills and nausea.

Final Word

The key to hot work safety is taking proper precautions and being on constant alert.