Purpose of Meeting

- To remind workers that performing hotwork can result in a serious injury.
- To reinforce hotwork safety rules.
- To consider ways to protect yourself from hotwork hazards.

Materials and Preparation

- A copy of the written hotwork safety rules or policy.

Note to Trainer

- Enter your name and the training date on the Training Sign In Sheet.
- Have each attendee sign the Training Sign In Sheet next to their name.
- Use this page for your reference and give attendees copies of the remaining pages.
HOTWORK SAFETY

Introduction

During the course of your work you may need to perform hot work such as welding, cutting, brazing, grinding or soldering. Hot work presents various hazards, and those hazards become more challenging to control when performed outside of designated hot work areas.

This training has been developed to educate workers about how to take appropriate precautions in order to perform hot work safely outside of designated areas.

Potential Hazards

Performing hot work or working in spaces adjacent to hot work can cause serious injuries such as:

- Burns from sparks and molten metal
- Adverse reactions to welding fumes in general
- Heavy metal poisoning
- Lung cancer from inhalation of carcinogenic substances
- Permanent hearing loss
- Radiation (flash) burns to the body and eyes from arc welding
- Electric shock
HOT WORK SAFETY

Pre-Planning

If hot work can be moved to a designated safe area, that is ideal. However, this is not always possible. Sometimes hot work activities such as welding, grinding, or torching must be done in place. In such cases, careful and knowledgeable pre-planning is essential. Pre-planning includes a hazard assessment to:

- Identify existing and potential hazards
- Eliminate or control these hazards

Safety Precautions

A number of common sense precautions are used to reduce hot work risks

- Physically isolating the work space from surrounding areas
- Moving combustible materials away from the welding area
- Ensuring approved equipment is used (torches, valves, regulators, etc)
- Making sure that equipment is in good condition
- Testing fire sprinklers to make sure they are working
- Controlling possible ignition sources

NOTES:
Personal Protective Equipment

Appropriate personal protective equipment (PPE) must be selected to protect workers from these hazards. The specific PPE requirements depend on the hazard assessment and may include:

- Respiratory protection
- Eye protection
- Protective clothing
- Foot protection
- Hand protection

Hot Work Permits

In circumstances where hot work cannot be moved to a designated safe location, you may need to complete a hot work permit. This includes an assessment of specific hazards and the steps being taken to reduce them. A Hot Work Permit typically includes:

- **Potential Hazards**
  (e.g., electrical, mechanical, etc.)

- **Procedures/Precautions**
  (e.g., ventilation, communication, sprinkler check, etc.)

- **Safety Equipment**
  (e.g., eye protection, respirators, fire extinguisher, etc.)

- **Vessel Prep Isolation**
  (i.e., what was done to prepare the space prior to work)

- **Special Tools**
  (e.g., lighting, non-sparking tools, etc.)

- **Special Work**
  (i.e., extra safety procedures that will be observed.)
Fire Watch

When there is a possible fire hazard present that cannot be effectively controlled or eliminated, a person will be appointed to monitor safety. This individual will have the appropriate type of fire extinguisher on hand at all times.

The person who has been assigned to be the fire watch:

- Must have no other responsibilities
- Must have appropriate equipment and training
- Must be able to view all areas where a fire may occur
- Is responsible for sounding the alarm and calling the fire department
- Has the authority to stop hot work if an unsafe condition arises
- Should only attempt to put out a fire when he/she can do so without injury

Fall Protection

When welding is done in places where there is a risk of falling 7 ½ feet or more, fall protection is necessary. Even a small burn can cause a person to reflexively jerk away in pain. If you lose your balance, you may fall and be seriously injured.

One of the following additional protections may be required when hot work is performed and there is a fall hazard:

- Guardrail
- Body harness & lifeline
- Safety net
- Fall protection plan & monitor
Confined Spaces

One of the most dangerous aspects of welding in a confined space is the atmosphere.

- Toxic gases may build up and cause suffocation or poisoning.
- Flammable or explosive gases may build up and cause a fire or explosion.
- Welding can also deplete the oxygen and create an oxygen deficient atmosphere. This can be a very dangerous condition.
- Confined spaces can also present fall hazards

A confined space will have a separate permit in addition to the hot work permit. It will cover: atmospheric testing, additional precautions/hazard assessments, and extra PPE requirements. Additional training will also be provided if you will be working in a confined space.

The risk of workplace fatalities go up substantially when work is performed in a confined space. Most of these deaths happen when untrained employees try to rescue coworkers.

Conclusion

It takes all employees working together to reduce the risk of injury during hotwork. Attending training is one of the ways you participate in this important process. Don’t be afraid to ask questions if you don’t understand a safety procedure.

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