

Safety

Trades Safety: Getting Started

Objectives:

- Name the agencies and organizations that make and enforce safety regulations, and explain an employee's responsibilities under those regulations
- List the physical hazards associated with chemicals and describe how to avoid those hazards
- Name several electrical shock hazards and the techniques used to prevent shocks
- List the steps in a lock out and tag procedure
- Explain the importance of machine guarding, and name several types of machine guards
- Name the four classes of fire and how to extinguish each of them
- Describe the proper technique used to lift a heavy load
- Explain how to avoid hand injuries when using hand tools and power tools
- List some of the hazards involved in welding and hot cutting operations and how to prevent them
- Explain how job analysis and the science of ergonomics are used to improve the workplace
- Explain the importance of using personal protective equipment (PPE) and name several types of PPE

Working Safely with Chemicals

Objectives:

- Recognize the six different ways in which a chemical can cause you physical injury
- Name the routes or paths of entry by which chemicals can enter the body
- Describe the basic types of injuries caused by chemicals
- Identify potential chemical dangers in your workplace
- Describe how to identify, store, and label hazardous chemicals
- List several methods used to prevent chemical accidents
- Explain why proper training is important to chemical handling
- Describe the types of personal protective equipment used and worn when handling chemicals
- Explain the role of governmental agencies in enforcing chemical regulations

Fire Safety

Objectives:

- Describe the types of property losses and injuries associated with fires
- Explain how fires are ignited
- Identify the four classes of fire
- Describe the primary fire hazards found in the workplace
- Explain the various ways in which fires can be prevented
- Describe the operation of several different fixed fire protection systems
- Identify the proper type of portable fire extinguisher to use on a fire
- Describe the operation of several different types of fire extinguishers
- Explain how to defend yourself and others in a fire situation
- Describe how to safely evacuate a burning building

Safe Handling of Pressurized Gases and Welding

Objectives:

- Identify common welding gases and understand how they're used in welding operations
- Point out the hazards associated with welding gases
- Safely handle and store different types of gas cylinders
- Safely operate a basic gas welding setup
- Recognize the safety considerations involved in the setup and operation of electric arc-welding equipment
- Identify welding equipment malfunctions and take corrective action
- Utilize fire prevention and protection methods specific to welding operations
- Discuss the importance of the hot-work-permit program in your facility
- Explain the correct use of protective clothing and equipment for welding
- Utilize proper ventilation when welding
- Effectively deal with confined spaces when performing welding operations

Electrical Safety

Objectives:

- Explain how electricity can harm you and your property
- Discuss the importance of properly using quality electrical components
- Follow the basic methods of protection when wiring electrical installations
- Tell why it's important to ground electrical equipment and systems
- Select the type of electrical equipment to use in a hazardous location
- List the safety practices required in an electrical work area
- Talk about the importance of a clear working space around electrical equipment
- Educate your own level of safety training to be sure it matches the electrical work you're performing

Material-Handling Safety

Objectives:

- Recognize the hazards associated with handling materials
- Know the types of injuries that can be caused by these hazards
- Understand how to effectively use safe material-handling practices
- Know how to avoid physical injury when handling loads
- Know and follow the rules for safe operation of powered industrial material-handling equipment
- Understand and respect the limits and restrictions placed on powered material-handling mechanisms

Machine Safety

Objectives:

- Recognize the basic machine motions that can present a hazard to you
- Recognize the types of machinery most likely to be hazardous to you
- Understand the types of injuries caused by accidents commonly associated with unsafe machine-operating procedures
- Discuss the importance of machine guarding and how to incorporate methods of guarding to avoid physical injury
- Recognize the four basic types of machine guards commonly used in industry
- Control various forms of hazardous machine energy through the use of lockout/tagout procedures
- Understand how and why to properly use personal protective equipment for added protection when using industrial equipment

Quality Concepts: Tools and Applications

Objectives:

- Describe how job roles change as a company evolves in its quality-consciousness
- Explain several ways in which you can support TQM
- Identify approaches, practices, and skills associated with positive organizational change
- Differentiate between the “change process” at the company level and the manufacturing “processes” that require improvement
- Describe some major causes of process variation and give examples of how they may affect you in your job
- Explain why and how the reduction of variability is a key factor in process improvement
- Describe why and how quality and process improvement depend on data-driven decision making
- Identify seven quality tools and explain their uses