



## **BURN PROTECTION**

### **INTRODUCTION**

Sparks and spatter fly off from the welding process. Hot metal and sparks blow out from the cutting process. The workpiece and equipment get hot. The flying sparks and hot metal, spatter, hot workpiece, and hot equipment can cause burns. Additionally, arc rays can cause radiation burns (see Fact Sheet No. 2).

### **HOW TO PREVENT BURNS**

- Wear dry, hole-free insulating gloves.
- Touching hot equipment such as electrode holders, gun tips, and nozzles can cause burns—always wear insulated gloves or allow a cooling period when touching these and any associated parts of equipment that are near the actual welding or cutting operation.
- Wear oil-free protective garments such as leather gloves, heavy shirt, cuffless pants, high shoes, and a cap.
- Do not wear pants with cuffs or shirts with open pockets or any clothing that can catch and hold molten metal or sparks.
- Wear high top shoes or leather leggings and fire-resistant boots.
- Use approved helmets or hand shields that provide protection for the face, neck, and ears, and wear a head covering to protect the head.
- Wear approved safety goggles with side shields.
- When welding or cutting overhead or in confined spaces, wear flame-resistant ear plugs or ear muffs to keep sparks out of ears.
- Keep clothing free of grease, oil, solvents, or any flammable substances.
- Remove any combustibles, such as a butane lighter or matches, from your person before doing any welding or cutting.

- If combustible substances spill on clothing, change to clean fire-resistant clothing before doing any welding or cutting.
- Use aprons, cape-sleeves, leggings, shoulder covers, and bibs designed and approved for welding and cutting service.
- Where unusually heavy welding or cutting is involved, use sheet metal shields for extra protection.
- For highly hazardous processes or jobs, give serious consideration to automation.
- Do not attempt to repair or disconnect electrical equipment under load. Disconnecting under load produces arcing of the contacts and may cause burns or shocks.

## **HOW TO PROTECT OTHERS FROM BURNS**

- Use noncombustible screens or barriers to protect nearby persons or watchers.
- Mark hot work pieces to alert others of the burn and fire hazards.
- If job requires several persons, have all wear proper protective gear and follow all required procedures.

## **INFORMATION SOURCES**

American National Standards Institute (ANSI). *Safety in Welding, Cutting, and Allied Processes*, Z49.1, available from American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

Occupational Safety and Health Administration (OSHA). *Code of Federal Regulations*, Title 29 Labor, Chapter XVII, Parts 1901.1 to 1910.1450, Order No. 869-019-00111-5, available from Superintendent of Documents, U.S. Government Printing office, Washington, DC 20402.

American National Standards Institute (ANSI). *Practice for Occupational and Educational Eye and Face Protection*, Z87.1, available from American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

\_\_\_\_\_. *Standard for Men's Safety-Toe Footwear*, ANSI Z41.1, available from American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

Mine Safety and Health Administration (MSHA). *Code of Federal Regulations*, Title 30 Mineral Resources, Parts 1-199, available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.