



Protecting Against Falling Objects

NATURE OF THE HAZARD

Welding, cutting and associated processes often take place in areas where falling objects may be present. Falling objects may seriously injure or kill. Falling objects are common problems on construction and demolition sites, from buildings to bridges, and are often a problem during maintenance work. Even sparks, spatter, and cut-off pieces can fall.

HOW TO PROTECT AGAINST FALLING OBJECTS

- Wear approved head and foot protection (see Information Sources).
- Be alert and aware of your total work environment and any possible overhead objects before you start working.
- Place a safety net or equivalent below overhead work when possible.
- Follow safe work practices when working beneath overhead activities.
- Notify others of overhead work and any changing job conditions.
- Remember, a welding helmet or goggles restricts vision and may prevent taking the action necessary to avoid falling objects.

- Post areas where falling objects are a hazard.

- Practice safe hot work procedures.

HOW TO PREVENT FALLING OBJECTS

- Be certain that material being welded or cut is secured from falling.
- Do not permit loose objects near the edge of overhead structures.
- Appropriately cover floor and wall openings. Floor hole covers must effectively support at least two times the weight of employees, equipment, and materials that may be imposed on the covers at any one time.
- Use toe boards with guardrails where work takes place near unprotected edges where materials could fall.
- Do not kick, throw, or push anything off overhead structures – this includes electrode stubs and scrap metal.
- Do not create falling objects for others – be alert to your actions.
- Follow manufacturers' instructions for lifting and moving equipment and supplies.

- Use fire blankets to prevent, or catch, falling sparks, spatter, and hot pieces.

INFORMATION SOURCES

American National Standards Institute (ANSI). *Safety in Welding, Cutting, and Allied Processes* (ANSI Z49.1), published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33166; telephone 800-443-9353; Web site: www.aws.org.

Occupational Safety and Health Administration (OSHA). *Code of Federal Regulations*, Title 29 Labor, Parts 1910.1 to 1910.1450, available from the U.S. Government Printing Office, 732 North Capitol Street NW, Washington, DC 20401; telephone: 800-321-6742; web site: www.osha.gov.

Mine Safety and Health Administration (MSHA). *Code of Federal Regulations* Title 30 Mineral Resources, Parts 1 to 199, available from the U.S. Government Printing Office, 732 North Capitol Street NW, Washington, DC 20401; telephone: 202-693-9400; web site: www.msha.gov.

American Welding Society (AWS). *Safety and Health Fact Sheets*, published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33166; telephone 800-443-9353; Web site: www.aws.org.

National Fire Protection Association (NFPA). *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work* (NFPA 51B), available from National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, telephone: 800-344-3555, web site: www.nfpa.org.

American National Standards Institute (ANSI). *Requirements for Protective Headwear for Industrial Workers*, Z89.1, available from ANSI, 11 West 42nd Street, New York, NY 10036-8002; telephone: 212-642-4900; web site: www.ansi.org.

ASTM International Standards, F2412, *Test Methods for Foot Protection*, and F2413, *Specification for Performance Requirements for Protective Footwear*, available from ASTM International, 100 Bar Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2559 (telephone: 610-832-9585; web site: www.astm.org). (Note: F2412 and F2413 have replaced the former ANSI Z41 standard, which has now been withdrawn.)