

WORKING AS A WELDER

- ❖ Noise control
 - ✓ Maintain machines / equipment regularly
- ❖ Ergonomics
 - ✓ Proper manual handling/correct lifting techniques-use lifting aids
 - ✓ Take frequent breaks especially when performing jobs in an awkward position
- ❖ Wear appropriate personal protective equipment:
 - Welding helmet with UV protection
 - Ear protectors
 - Safety shoes with non-skid soles
 - Respiratory equipment in poorly ventilated/confined spaces
 - Fire resistant aprons
 - Fire resistant heavy gloves
- ❖ Electrical safety:
 - ✓ Careful maintenance of the earthing/grounding arrangement of equipments
 - ✓ No overloading of electrical sockets
 - ✓ Use equipments of good quality
 - ✓ Replace electrical cords if wires are exposed
 - ✓ Switch off all appliances at the end of the work day
- ❖ Store flammable and combustible liquids far away from work area
- ❖ Fire Prevention
 - ✓ Adequate fire extinguishers and alarms, training in fire procedures and designated emergency assembly points
- ❖ Do not use solvents to remove grease-use a water based cleanser instead
- ❖ Follow safety signs e.g. NO SMOKING
- ❖ Inspect ladders/raised platforms before climbing
- ❖ Learn first aid and ensure first aid boxes are available
- ❖ Appropriate vaccinations



**OCCUPATIONAL HEALTH DIVISION
DEPARTMENT OF HEALTH SERVICES**

***FACTS ON THE HEALTH
AND SAFETY RISKS***

1. INTRODUCTION

- ❖ A welder works in a variety of workplaces and their work involves using specialized equipment to "weld" or join together metals, cut or trim metal objects
- Apart from welding, welders may also solder and grind metals

2. HEALTH AND SAFETY HAZARDS

❖ Chemical Hazards

- Welding fumes are a complex mixture of metallic oxides, silicates and fluorides and can have long term health effects:
 - Respiratory tract infections, metal fume fever (flu like illness)
 - Pneumoconiosis-respiratory tract disorder due to inhaling metallic fumes
 - Cancers e.g. nasal and lung
 - Central nervous system damage due to metallic fumes
 - Chronic poisoning from exposure to cadmium, zinc, PCB's

❖ Physical Hazards

- Burns from contact with hot welded surfaces

- Heat stress and heat exhaustion is common especially if the workplace is poorly ventilated
- Exposure to noise from arc welding equipment - loud noise can cause hearing loss
- Exposure to ultraviolet and infrared radiation - can result in skin or eye damage (welders eye, cataract)
- Exposure to gamma or x-rays from inspection equipment

❖ Ergonomic Hazards

- Wrist, elbow or shoulder joint pain due to repetitive movements
- Strains, sprains and musculoskeletal problems due to:
 - Lifting or moving heavy objects
 - Prolonged awkward position or standing
 - Handling heavy welding guns

❖ Psychosocial Hazards

- Psychological stress when working under time pressure/deadlines
- Shiftwork or extended work days

❖ Safety Hazards

➤ Risk of injury due to:

- Fall from ladders, elevated platforms or confined space
- Slips and trips from wet and greasy floors
- Electrical shocks from excess moisture
- Cuts and lacerations from sharp metal edges
- Crush injuries e.g. fall of heavy objects on toes
- Other bodily injuries e.g. eye from flying objects during welding or grinding especially when falling into folds of rolled up sleeves/pants

- Fires and explosions e.g. from contact of sparks with flammable liquids and compressed gases

3. PREVENTION AND CONTROL

❖ General environmental conditions:

- ✓ Ensure adequate ventilation to reduce heat stress as well as fumes, gases and vapors
- ✓ Adequate illumination and comfortable temperature