

Hazard Alert



Welding

Hazard Summary

A small business operator was severely burned when his clothing caught fire while he was operating a gas cutting torch. The operator was a lone worker who was cutting the metal bars of a conveyer chain when the touch hose ruptured and caught fire. The incident resulted in 3rd degree burns to 70% of the worker's body.

Hazard Location

All welding shops, automotive repair shops, farms or workplace that use welding or cutting torches.

Contributing Factors

The extent of the injuries sustained in this serious workplace incident may be attributed to the following factors:

- Fire retardant clothing not worn
- Working alone
- Propane tank not equipped with an excess flow valve
- Hot or molten metal contact with lower quality fuel lines caused a rupture in the fuel lines

Legislated Requirements

- OHS Act Section 17 States: A Self-employed person shall (a) take every reasonable precaution to protect the self-employed person's own occupational health and safety and that of other persons who may be affected by the self-employed person's undertaking.
- OHS General Regulations section 37.9 state: The employer shall ensure that all employees engaged in welding or cutting operations wear, and all employers shall wear (a) adequate fire retardant work clothing; (b) fire retardant gauntlet type gloves and arm protection; (c) an apron of fire retardant or adequate material; (d) adequate eye and face protection against harmful radiation, or particles of molten metal, or while chipping and grinding welds; and (e) safety boots which meet the requirements of section 45.15.
- OHS General Regulations section 37.24 states: All welding and cutting burners shall be equipped with reverse flow check valves installed as close as possible to the regulators.
- OHS General Regulations section 53.2 (1) states: Where a worker is working alone, the employer shall develop and implement written procedures to ensure, as far as is reasonably practicable, the health and safety of the worker from risks arising out of, or in connection with, the work assigned.

Recommendations

- Anyone involved in work with welding or cutting processes must wear fire retardant clothing
- Hazard assessments should be performed in hazardous workplaces
- All propane tanks must be equipped with an excess flow valve (see images on right)
- All welding and cutting burners must be equipped with reverse flow check valves installed as close as possible to the regulators
- Workers must be very attentive when using cutting or welding equipment, and be aware of the proximity of the fuel lines in relation to the torch and any hot materials. Hose hangers should be used to suspend the fuel lines above the work, if possible
- Inspections of all welding and cutting equipment should be conducted daily

