

# Spot the Safety Violations: Ensuring Use of Proper PPE for Welding & Hot Work



Is This the Way You Want YOUR Workers to Do Hot Work'

How many OHS violations in this photo can you spot'



OHS laws require employers to ensure that workers performing welding, burning and other hot work operations work safely using proper PPE and protective equipment. OHS inspectors happening on this scene could get writer's cramp writing up all the violations the pictured worker is committing.

## 1. Inadequate Eye & Face Protection

Starting with the most obvious, those humble reading glasses the worker is wearing are woefully inadequate to protect his eyes and face against radiation, sparks, molten metal particles and lord knows what other harmful debris engulfing him. He should be wearing

## 2. No Head Covering

Although his hair is tied back, it's still exposed to flying and flammable debris that could set it ablaze. A welding helmet would have been a much smarter choice.

## 3. Flammable Clothing

Compounding the worker's apparel sins are the cotton hoodie and jeans he's wearing rather than the flame-resistant clothing required when performing hot work. Directing the welding stream so close to his legs adds nicely to the effect. A few more moments of such intense heat would be enough to cause his pants to melt or burst into flames.

#### **4. No Leather Apron**

OHS laws and the CSA and other voluntary standards they incorporate mandate that workers wear aprons made of leather or other suitable materials when welding.

#### **5. No Protective Gloves**

Although it's hard to see the worker's hands, he clearly isn't wearing the protective gauntlet gloves and arm protection required for hot work.

#### **6. Inadequate Foot Protection**

The final piece of PPE required for welding is substantial safety footwear made of leather or other suitable material. And while we can't tell exactly what kind of footwear the worker is using, based on his track record, it's a pretty good bet that he's not wearing the right kinds of boots for welding.

#### **7. Proximity to Flammable & Explosive Substances**

The PPE faux pas are not the only or most egregious violation the worker is committing. Take a look at what my man is sitting on—a container of flammable substances! Needless to say, welding on or near flammables and explosives is highly illegal, not to mention extremely dangerous. To be fair, there's always the possibility that before work began a qualified person did an inspection and verified that the container was drained and thoroughly cleaned of its flammable contents. But then again, how realistic is it to believe that an employer that took the trouble to perform a required proper

pre-welding safety inspection would then turn around and allow its workers to weld without any semblance of proper PPE'

## 12 Required

### Welding Safety Measures

The Moral: Do not perform welding, cutting or other hot work operations unless the appropriate safety measures are in place, including ensuring that:

- Hot work operations meet CSA W117.2-94, Safety in Welding, Cutting and Allied Processes;
- Work areas are kept free of flammable and explosive substances;
- Hot work isn't done on containers that contain or used to contain flammables and explosives unless a competent person inspects and certifies that the substances are gone and the work is safe;
- Local exhaust ventilation is used at fixed work stations to minimize worker exposure to airborne contaminants from welding, burning or soldering;
- Workers are provided and properly use respirators where local exhaust ventilation is not practicable, e.g., for emergency or short duration work;
  - The base metal is rid of coatings that could emit lead, chromium or other harmful products before welding or cutting begins;
  - Regulators, automatic reduction valves, hoses and other welding equipment is used only for the gas for which it's designed;
- Operators ensure that welding and burning equipment is free of defects, leaks, oil and grease before each use;
  - Suitable safety devices to prevent reverse gas flow and arrest flashback are installed between the torch and regulator of each hose in an oxyfuel system;
  - Suitable receptacles for electrode stubs are provided and properly used;
  - Screens, curtains, partitions or other suitable protection against arc flash radiation are in place and/or workers use proper eye and face protection before arc welding is performed.