MAFES Dawg Tracks

November 23, 2009 — *Safety Tips: Arc Welding Safety*

Welding is a common practice in all of our support farm shops. It includes shielded metal-arc, gas shielded, and resistance welding. As everyone knows, arc welding equipment varies in size and type. When in doubt about using the equipment, it never hurts to refer back to the instruction manual for references.

You may ask, why is he writing about welding safety? Well, as we mention from time to time, reminders or memory-joggers sometimes drive home the point of refreshment that might just help to save an injury to a fellow worker or ourselves.

Following are some tips that will help to re-enforce the use of safe welding practices and reminders of the personal protective equipment that we should use while doing welding tasks:

General Arc Welding Safety –

- Before starting any welding operation, a complete inspection of the welding system should be made.
- Read all warning labels and instruction manuals.
- Remove all potential fire hazards from the welding area.
- Always have a fire extinguisher in the welding area in case of an emergency.
- Equip all the welding machines with power disconnect switches which can be shut off quickly.
- The power should always be disconnected before making any repairs to a machine.
- Proper grounding is essential.
- Electrode holders should not be used if they have loose cable connections, defective jaws, or poor insulation.
- An arc should not be struck if someone without proper eye protection is nearby.

Personal Protective Equipment –

- Infrared radiation is a cause of retinal burning and cataracts. Protect your eyes with a welding helmet properly fitted and with the proper grade of filter plates.
- Protect your body from welding splatter and arc flash with protective clothing, such as:
  ~Woolen clothing (or treated cotton)
  ~Flame-proof apron
  ~Proper fitted clothing with no frays
  ~Pants should be straight-leg and cover the shoe tops
  ~Fire resistant cape/shoulder cover f/overhead work
  ~Gloves
  ~Long sleeved shirts
- Check protective clothing before each welding project to make sure that it is in good condition.
- Keep clothing and protective apparel free of grease and oil.

Proper Ventilation –

- Be sure that there is adequate ventilation available when welding in confined areas or barriers to air movement.
- Position your system where you can get natural drafts or fans blowing the fumes across your face.

Keys to Sufficient Ventilation –

- The recommended area for welding should contain at least 10,000 cubic feet for each welder.
- The recommended ceiling height is no less than 16 feet.
- Cross ventilation isn't blocked by partitions, equipment, or other structural barriers.
- Welding should never be performed in confined spaces.

**** According to codes, if the above space requirement can't be met, a mechanical ventilating system that exhausts at least 2000 cfm of air for each welder (except where local exhaust hoods, booths or air-line respirators are) should be used.

Avoiding Electrical Shock –

Electrical shocks can kill! To prevent electrical shock:

- Use well insulted electrode holders and cables.
- Make sure that the welding cables are dry and free of grease and oil.
- Keep welding cables away from power supply cables.
- Wear dry hole-free gloves.
- Maintain use of dry clothing.
- Insulate the welder from the ground by using dry insulation such as a rubber mat or dry wood.
- Ground the frames of the welding units.
- Never change the electrodes with bare hands or wet gloves.

These points may seem repetitious, but if used and referred to, your welding jobs will be more enjoyable, and you will be more cognizant of "keeping safe."

SAFETY RULES ARE THERE TO FOLLOW

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SO TAKE CARE AND WE SHALL SEE YOU TOMORROW!!!

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