



Tailgate/Toolbox Safety Training

Safety Services Company-Safety Meeting Division, PO Box 6408 Yuma, AZ 85366-6408 Toll Free (866) 204-4786



Company Name: _____ Job Site Location: _____

Date: _____ Start Time: _____ Finish Time: _____ Foreman/Supervisor: _____

Topic 667: MIG and TIG Welding (Electric Shock)

Introduction: Only qualified workers should operate MIG and TIG welders. Following are safety guidelines for ensuring safe operations:

Electric shock: Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on. The input power circuit and machine internal circuits are also live when power is on. In semiautomatic or automatic wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live.

- **Do not** touch live electrical parts. Incorrectly installed or improperly grounded equipment is a hazard.
- **Wear** dry, hole-free insulating gloves and body protection. Insulate yourself from the work and ground by using dry insulating mats or covers big enough to prevent any physical contact with the work or ground.
- **Do not** use AC output in damp areas, when movement is confined, or if there is a danger of falling. Use AC output only if required for the welding process. When AC output is required, use remote output control if present on unit.



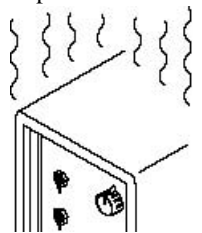
Safety precautions are required when any of the following electrically hazardous conditions are present:

- In damp locations or while wearing wet clothing
- On metal structures such as floors, gratings, or scaffolds
- When in cramped positions such as sitting, kneeling, or lying
- When there is a high risk of unavoidable or accidental contact with the workpiece or ground

For these conditions, use the following equipment in order presented:

- 1) A semiautomatic DC constant voltage (wire) welder
- 2) A DC manual (stick) welder
- 3) An AC welder with reduced open-circuit voltage
- 4) Use of a DC, constant voltage wire welder is recommended.

- **Disconnect** input power or stop engine before installing or servicing equipment. Lockout/tagout input power according to Safety Standards.
- **Properly** install and ground the equipment according to the owner's manual and national, state, and local codes.
- **Always** verify the supply ground. Check and be sure that the input power cord ground wire is properly connected to the ground terminal in the disconnect box or that the cord plug is connected to a properly grounded receptacle outlet.
- **When** making input connections, attach proper grounding conductor first. Double-check connections.
- **Frequently** inspect input power cord for damage or bare wiring. Replace cord immediately if damaged.
- **Remember**, bare wiring can kill. Turn off all equipment when not in use.
- **Do not** use worn, damaged, undersized, or poorly spliced cables. **Do not** drape cables over your body.
- **When** earth grounding of the workpiece is required, ground it directly with a separate cable.
- **Do not** touch electrode if you are in contact with the work, ground, or another electrode from a different machine.
- **Never** touch electrode holders connected to two welding machines at the same time since double open-circuit voltage will be present.
- **Use** only well-maintained equipment. Repair or replace damaged parts at once. Maintain unit according to manual.
- **Wear** a safety harness if working above floor level. **Keep** all panels and covers securely in place.
- **Clamp** work cable with good metal-to-metal contact, to workpiece or worktable, as near the weld as practical.
- **Insulate** work clamp when not connected to workpiece to prevent contact with any metal object.
- **Do not** connect more than one electrode or work cable to any single weld output terminal.
- **Never** install or place unit on, over, or near combustible or flammable surfaces.
- **Never** overload building wiring. Be sure power supply system is properly sized, rated, and protected to handle the unit.
- **Allow** cooling period; follow rated duty cycle. Do not block or filter airflow to unit.
- **Reduce** current or reduce duty cycle before starting to weld again. To reduce magnetic fields in the workplace, use the following procedures:
 - Keep cables close together by twisting or taping them.
 - Arrange cables to one side and away from the operator.
 - Do not coil or drape cables around your body.
 - Keep welding power source and cables as far away from operator as practical.
 - Connect work clamp to workpiece as close to the weld as possible.



Conclusion: Retrain workers periodically. Remember, while welding is being done, keep all visitors from entering the work area.

Work Site Review

Work-Site Hazards and Safety Suggestions: _____

Personnel Safety Violations: _____

Material Safety Data Sheets Reviewed: _____ (Name of Chemical)

Employee Signatures:

(My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

_____	_____	_____
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Foreman/Supervisor's Signature: _____

These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.