

ILLUSIONS AUSTRALIA

SAFE WORK PROCEDURE

SWP 075 – SPOT WELDER

1. PURPOSE AND SCOPE

Minimum requirements for safe operation of resistance spot welders at Illusions Australia.

Applies to joining suitable metal components using approved fixed or portable resistance spot-welding equipment.

2. AUTHORISATION AND COMPETENCY

Only trained, competent and authorised workers may operate the spot welder.

Operators must understand electrode pinch force, hot metal, electrical hazards, sparks, coatings/fumes and cooling requirements.

3. REQUIRED PPE

The following PPE must be worn as appropriate:

- Safety glasses or suitable face protection for sparks.
- Heat-resistant welding gloves appropriate to the task.
- Safety footwear.
- Protective clothing suitable for hot metal/sparks.
- Hearing protection where required.

4. PRE-START CHECKS

Before commencing work, confirm that:

- Welder, leads/cables, electrodes, guards and controls are serviceable.
- Electrodes are aligned and in suitable condition.
- Workpieces are clean enough for the process and coatings/materials have been assessed for fumes.
- Ventilation is adequate.
- Combustibles are removed/protected.
- Hands can remain clear of electrode pinch points.
- Cooling system is operating where fitted.

5. SAFE OPERATING PROCEDURE

1. Prepare and align the workpieces.
2. Set current/time/force only within approved parameters.
3. Position work using fixtures/tongs where practicable.
4. Keep fingers clear of electrodes and clamping points.
5. Start ventilation/extraction.
6. Activate the weld cycle only when the work is correctly positioned and others are clear.
7. Allow electrodes to release fully before repositioning.

8. Treat the weld and nearby metal as hot.
9. Monitor electrodes/cables for overheating.
10. Switch off and isolate before electrode maintenance or internal adjustment.

6. PROHIBITED PRACTICES

Workers must not:

- Place fingers between electrodes.
- Weld sealed containers or unknown materials.
- Weld coated/contaminated metal without assessing fumes.
- Operate with damaged insulation, cables or controls.
- Bypass guards/interlocks.
- Work near uncontrolled flammables.
- Touch freshly welded metal without checking temperature.
- Perform maintenance while energised.

7. PINCH AND CRUSH HAZARD

Electrodes can close with substantial force.

- Use fixtures or handles.
- Keep all body parts out of the closing zone.
- Do not defeat two-hand/interlock controls where fitted.

8. HEAT, SPARKS AND FUMES

Spot welding can generate hot metal, sparks and hazardous fumes from coatings.

- Remove/protect combustibles.
- Use ventilation/extraction.
- Identify coatings before welding.

9. ELECTRICAL SAFETY

High welding current is used even though electrode voltage may be relatively low.

- Maintain cables/insulation.
- Keep equipment dry.
- Isolate before maintenance.

10. FAULTS, DAMAGE AND ABNORMAL CONDITIONS

Stop for damaged cables, electrode misalignment, overheating, control failure, excessive sparking, failed cooling or abnormal fumes.

Isolate and tag defective equipment.

11. SHUTDOWN AND HOUSEKEEPING

- Switch off and isolate.

- Allow electrodes/workpieces to cool.
- Remove metal debris.
- Leave ventilation running as needed to clear fumes.
- Report defects.

12. EMERGENCY AND INCIDENT RESPONSE

1. Stop the equipment or activity immediately.
2. Isolate the hazard or energy source where safe to do so.
3. Provide or obtain first aid as required.
4. Notify the Foreman, Leading Hand or other authorised Illusions Australia representative.
5. Call emergency services where required.
6. Do not recommence until the incident, defect or unsafe condition has been addressed.

13. STOP WORK REQUIREMENT

Work must stop where:

- Electrode/pinch controls are defective.
- Material/coating is unknown.
- Ventilation or fire controls are inadequate.
- Electrical components are damaged.
- Work cannot be positioned without hands entering the pinch zone.

No production requirement or deadline takes priority over safe work.

DOCUMENT CONTROL

Document	SWP 075 – Spot Welder
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