



Australian Government

Department of Education, Employment and Workplace Relations

LMTTF3004A Perform advanced welding of plastic materials

Revision Number: 1

LMTTF3004A Perform advanced welding of plastic materials

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to perform high frequency welding of plastic materials using equipment within the safe operating parameters of the equipment used.
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Application of the Unit

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This unit applies to the welding of plastic in the textile fabrication industry. Work may be conducted in a variety of environments, such as:

- operational indoor workplaces
- operational outdoor workplaces
- hazardous or exposed conditions

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under direct supervision.

The application of this unit is according to OHS practices of the enterprise and workplace practices, which may include:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- standard operating procedures
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling

This unit requires the application of skills associated with planning and organising for the safe and effective use of advanced welding processes and technology. This unit also requires the ability to read and interpret workplace instructions, inspect and check the quality of outcomes, complete workplace records and identify and address problems relating to own work. Self management skills are applied to ensure workplace and quality standards are achieved.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

LMTTF2014A

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for welding	1.1 Material to be welded is examined and prepared for welding 1.2 Work is planned to maximise safety and productivity 1.3 Suitable electrical power outlets, if required, are identified 1.4 Safe working environment is established and welding equipment checked for serviceability 1.5 Workplace procedures and instructions are read and interpreted
2 Select and prepare tools	2.1 Appropriate supplementary hand and power tools are selected and prepared for the job 2.2 Extension power cables are checked for knots and insulation damage 2.3 Electrical tools are checked for safe connection to power supply 2.4 Tools are examined for damage, missing components or other defects (including frayed power cords where applicable) 2.5 Safety equipment is used during tool operation in accordance with OHS practices 2.6 Required tasks are performed using tools in accordance with OHS practices 2.7 Tools are located in a safe position when not in use 2.8 Tools and extension cords are cleaned and stored in accordance with industry and OHS practices
3 Perform high frequency welding	3.1 Surfaces of material are prepared for welding 3.2 Material is laid out on working table or other suitable surface and anchored to prevent movement 3.3 Equipment temperature or operating frequency is adjusted to prescribed settings 3.4 Screens or barriers, where fitted, are lowered prior to welding process 3.5 Operator and bystanders are kept at an appropriate distance or suitably protected when high frequency welding is being undertaken 3.6 Welding equipment is operated in accordance with OHS practices 3.7 Weld area is examined or tested for correct fusion of materials 3.8 Problems or faults are identified and addressed 3.9 Work piece is removed
4 Inspect quality, labelling and documentation	4.1 Completed weld is informally inspected to verify that it appears to be of an acceptable standard 4.2 Completed product is labelled or tagged and any necessary documentation completed in accordance with workplace

ELEMENT	PERFORMANCE CRITERIA
5 Clean up and maintain equipment	procedures 5.1 Work area is cleaned and tools and electrical equipment are stowed away

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Demonstrates knowledge of:

- specific OHS requirements associated with high frequency welding equipment
- hazards associated with heated plastics
- plastic welding principles and techniques
- general operating principles of plastic welding equipment
- a range of plastic welding equipment, hand tools and power tools commonly used in the plastic welding process and their appropriateness for particular applications
- power sources such as single phase, three phase and weather protected outlets
- materials and equipment specifications
- relevant quality standards for plastic welds
- environmental requirements of relevant industry and workplace procedures
- general housekeeping policies and procedures
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- apply work instructions and established procedures
- understand relevant technical information about plastic welding processes, materials and equipment
- use relevant hand and power tools
- use relevant chemicals and cleaning agents and dispose of waste products
- maintain work area
- read, interpret and follow information on work specifications, standard operating procedures and work instructions and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Demonstrates skills and knowledge to:

- comply with all relevant safety requirements including safe use of high frequency welding equipment, hand and power tools and electrical equipment.
- follow work orders
- understand equipment and materials specifications and instructions needed for the plastic welding process
- prepare material to be welded and set up welding equipment
- perform a variety of welds with a satisfactory degree of quality consistency
- perform normal operator maintenance of work area to enable work to be conducted safely and efficiently
- document and communicate work related information including reporting of faults and other problems

Consistently applies skills and knowledge when:

- organising work
- completing tasks
- identifying improvements
- using workplace practices
- using OHS practices
- recording and reporting accidents and incidents
- assessing operational readiness of equipment used and work processes
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions
- completing work systematically with attention to detail without damage to goods and equipment

Context and specific resources for assessment

Assessment may occur on the job or in an appropriately simulated environment and requires access to work areas, materials and equipment, and to information on workplace practices and OHS practices.

Guidance information for assessment

This unit may be assessed independently or in combination with other relevant units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Material may include	• PVC • vinyls • clear plastics
Welding equipment may include	• high frequency welder
Hand and power tools may include	• hammers • rasps • files • portable sanders
OHS practices	OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may include: • manual handling techniques • standard operating procedures • personal protective equipment • safe materials handling • taking of rest breaks • ergonomic arrangement of workplaces • following marked walkways • safe storage of equipment • housekeeping • reporting accidents and incidents • other OHS practices relevant to the job and enterprise

Unit Sector(s)

Sector Textile Fabrication