



Australian Government

Department of Education, Employment and Workplace Relations

MEM19050A Hand carve engraving work

Release: 1

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Modification History

New unit

Unit Descriptor

This unit of competency covers the skills and knowledge required to engrave/carve in relief onto a variety of jewellery or object surfaces.

Application of the Unit

This unit applies to engraving work, which includes seal carving and relief carving, on both concave and convex surfaces and carving half hoop rings. Work is conducted according to design specification and includes transferring design drawing onto surface for carving. Carving must be conducted on a range of metals surfaces and may also include alternative materials, such as coral, shells, enamel, glass and ceramic, where they are used in the jewellery or object design.

Work includes use of jewellery making equipment.

Band B

Unit Weight 4

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Confirm work requirements	1.1	Analyse specifications or design drawing to determine carving requirements
		1.2	Determine requirements for drawing modification or resizing in order to fit metal surface
		1.3	Confirm metal surface will respond to carving technique
2	Transfer and mark out design	2.1	Apply techniques to reduce or enlarge the design to a given size
		2.2	Transfer drawing detail onto metal surface
		2.3	Mark out various carving layouts and patterns using predetermined reference/datum points
3	Apply carving techniques	3.1	Select and use tools, equipment, materials and consumables appropriate to job requirements in accordance with manufacturer specifications and organisational procedures
		3.2	Determine need for specialist carving tools and design and produce tools, as required, to complete work
		3.3	Perform engraving carving in accordance with design stipulations
		3.4	Observe occupational health and safety (OHS) requirements and safely operate all workshop equipment used
		3.5	Perform work in a manner that minimises waste and complies with environmental requirements

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| 4 | Finish work | 4.1 | Check work meets client requirements and quality standards |
| | | 4.2 | Clean item and prepare for presentation to client |
| | | 4.3 | Complete documentation on work undertaken |
| | | 4.4 | Clean up work area |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- interpreting client requirements
- identifying the engraving sequence
- determining suitability of item and materials for carving work
- using datum lines/points and marking out design
- selecting and using gravers, scorpers and other applicable tools
- controlling engraving tools
- machining and sharpening graver shape and cutting angles
- handling and securing work pieces
- maintaining points/cutting edges/polished faces
- completing work by hand according to job requirements

Required knowledge

Required knowledge includes:

- range of techniques used for carving
- characteristics and responses of metals and common materials used in jewellery
- engraving terminology
- sources of task-related information
- securing methods and limitations
- different gravers, scorpers and other tools and their applications
- techniques for producing and maintaining cutting edges
- equipment used for maintaining gravers
- required industry standards
- tool maintenance
- hand engraving techniques
- hazards and control measures, including housekeeping
- use and application of personal protective equipment
- safe work practices and procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	A person who demonstrates competency in this unit must be able to perform seal carving and relief carving on both concave and convex metals surfaces.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently: • transfer design onto metal surfaces for carving • implement OHS workplace procedures to safely and effectively carve relief and seal designs on a range of metal surfaces • perform carving to industry standard • determine the requirements for repair or restoration.
Context of and specific resources for assessment	• Assessment may occur on the job or in an appropriately simulated environment. Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.
Method of assessment	• Assessment must satisfy the endorsed Assessment Guidelines of the MEM05 Metal and Engineering Training Package. • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge. • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application. • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.

	• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Assessment may be in conjunction with assessment of other units of competency where required.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

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. 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) may also be included.

Materials	Materials and equipment may include: • gold, silver and platinum • precious or semi-precious stones • coral and shells • copper and copper alloys • enamel, glass and ceramic
Equipment	Equipment may include: • square graver • flat graver • lozenge graver • half round gravers • engravers pad • scorpers • plasticine • metal ruler • eye loupe
Carving work	Carving work must include: • seal carving • relief carving
OHS requirements	OHS requirements may include: • wearing personal protective equipment in the

	jewellery workshop • aprons • protective foot wear • eye protection while operating rotary equipment
Environmental requirements	Environmental requirements may relate to: • liquid waste • solid waste • gas, fume, vapour, smoke emissions, including fugitive emissions, and dust • excessive energy and water use • excessive noise

Unit Sector(s)

Jewellery

Custom Content Section

Not applicable.