



Australian Government

Department of Education, Employment and Workplace Relations

MEM19048A Develop and apply complex borders and decorations for hand engraving

Release: 1

MEM19048A Develop and apply complex borders and decorations for hand engraving

Modification History

New unit

Unit Descriptor

This unit of competency covers the skills and knowledge required to engrave a variety of complex borders and ornate decorations on a variety of metal surfaces.

Application of the Unit

This unit applies to engraving items, such as jewellery and metal objects, according to client requirements. Engraving includes complex borders and decorations, such as floral panels, geometric shapes, logos, crests and ciphers.

Work includes use of engraving equipment and inspection of the work produced.

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	Plan complex borders and ornate decorations for engraving	1.1	Identify and list elements of various border designs and decorative drawing styles for engraving
		1.2	Determine client requirements for border designs and decoration
2	Develop designs to meet client requirements	2.1	Develop complex designs for borders and decorations to predetermined dimensions and client requirements
		2.2	Use computer-based tools to explore and develop complex borders and decorative designs to predetermined dimensions and client requirements
3	Mark out border and decorative layouts on metal surface	3.1	Identify techniques to reduce or enlarge designs to predetermined dimensions according to client requirements
		3.2	Accurately mark out lettering and/or monogram and cipher layouts on metal surfaces to be engraved using predetermined reference/datum points
4	Perform hand engraving	4.1	Perform engraving of complex and ornate style borders to a commercial industry standard
		4.2	Perform engraving of complex and ornate decorative layouts to a commercial industry standard
		4.3	Perform work in a manner that minimises waste and complies with environmental requirements
		4.4	Observe occupational health and safety (OHS) requirements and safely operate all workshop equipment

used

- 5 Finish work
 - 5.1 Check engraving meets client requirements and quality standards
 - 5.2 Clean item and prepare for presentation to client
 - 5.3 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
- using drawing tools
- selecting and using gravers, scorpers and other applicable tools
- controlling engraving tools
- drawing decorative borders and other design work to required dimensions
- using datum lines/points
- skilfully laying out and transferring designs for lettering, monograms and ciphers onto metal surfaces
- machining and sharpening graver shape and cutting angles
- handling and securing work pieces
- maintaining points/cutting edges/polished faces
- completing fine engraving work by hand

Required knowledge

Required knowledge includes:

- engraving terminology
- sources of task-related information
- historic and cultural sources for complex borders and decorative design styles
- design research techniques
- elements and principles of design as applied to border and surface decoration design
- characteristics and responses of metals for engraving purposes
- 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
- basic 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 engrave a variety of complex borders and decorations on a range of metal surfaces.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently:</p> <ul style="list-style-type: none"> • implement OHS workplace procedures to safely and effectively use engraving equipment and processes • produce aesthetically pleasing decorative design work demonstrating application of the elements and principles of design • engrave with appropriate spacing and height of borders and decorative design work • represent appropriate fine line detail and shading • complete and present design and layout work that is clean, accurate and meets with client approval • produce work according to commercial standards.
Context of and specific resources for assessment	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

	<p>knowledge to ensure its correct interpretation and application.</p> <ul style="list-style-type: none">• 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.
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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.
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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.

Complex border designs	Complex border designs may include: <ul style="list-style-type: none"> floral patterns geometric patterns
Complex decorations	Complex decorations may include: <ul style="list-style-type: none"> floral panels geometric shapes logos, crests and ciphers
Metal surfaces	Metal surfaces may include, but are not limited to: <ul style="list-style-type: none"> gold silver platinum alloys
Computer-based tools	Computer-based tools may include, but are not limited to: <ul style="list-style-type: none"> computer-generated fonts word processing applications vector based and bitmap drawing applications desktop publishing applications printers
Elements and principles of design	Elements and principles of design may include: <ul style="list-style-type: none"> line and direction shape and size texture, colour and value harmony contrast dominance

	<ul style="list-style-type: none"> • repetition • gradation and radiation • unity • proportion • alternation • balance
OHS requirements	<p>OHS requirements may include:</p> <ul style="list-style-type: none"> • wearing personal protective equipment in the jewellery workshop • aprons • protective foot wear • eye protection while operating rotary equipment
Environmental requirements	<p>Environmental requirements may relate to:</p> <ul style="list-style-type: none"> • 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.