



Australian Government

MEM19037 Plan and implement chenier fabrication process

Release: 1

MEM19037 Plan and implement chenier fabrication process

Modification History

Release 1. Supersedes and is equivalent to MEM19037A Plan and implement chenier fabrication process.

Application

This unit of competency defines the skills and knowledge required to fabricate chenier items and basic hinges. It applies to initial production and repair work.

This unit applies to individuals involved in jewellery manufacture in a small or large-scale production context. They use and adapt technical skills and knowledge to produce work that meets pre-determined design and production requirements.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 2

Pre-requisite Unit

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

Competency Field

Jewellery

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine job requirements	1.1 Follow standard operating procedures (SOPs) and meet environmental requirements 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Use personal protective equipment (PPE) in accordance with SOPs 1.4 Identify job requirements from specifications

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Prepare for work	2.1 Establish, plan and organise stages, materials, tools and equipment for the fabrication process 2.2 Accurately calculate required materials based on specifications
3. Draw chenier materials to size	3.1 Cut materials to required size 3.2 Anneal materials to relieve stress based on specifications 3.3 Draw materials to specified tolerance using appropriate equipment 3.4 Carry out finishing processes, including soldering, to specifications
4. Produce items from cheniers	4.1 Solder seams free from pin holes, inclusions and excess flooding 4.2 Ensure cheniers have a smooth and blemish-free surface 4.3 Conduct quality assurance during construction to maintain finish consistency and ensure items are produced to all specified dimensions
5. Fabricate hinges	5.1 Produce knuckles and bearer wires or sheets to specification 5.2 Gap items to size and specification 5.3 Cut, file and place knuckles according to item requirement 5.4 Flush and draw solder under knuckles 5.5 Make pin fit comfortably through knuckles of adjoining sides

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Specifications include one or more of the following:	• drawings • job sheets • work instructions.
Equipment includes one or more of the following:	• jewellery bench and adjustable chair • soldering torch and equipment • pickle bath and heater • flexible drive and drill bits • swage blocks • hand tools • measuring and marking out equipment • abrasives • draw bench and various drawplates • polishing motor with extraction, mops, brushes and various polishing compounds • protective clothing and equipment.
Cut materials includes one or more of the following:	• establishing required wall thickness and diameter • establishing required swage or form.
Material includes one or more of the following:	• various thickness sheets • silver • gilding • nickel silver • hard solder • medium solder
Finished includes one or more of the following:	• finishing by files and emery • polishing on a polishing motor using appropriate mops and compounds.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM19037A Plan and implement chenier fabrication process.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM19037 Plan and implement chenier fabrication process

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- establishing resource requirements and specifications
- calculating required materials in accordance with SOPs
- cutting materials using appropriate tools, equipment and processes
- annealing and drawing chenier materials on at least two occasions to specified tolerance using appropriate equipment
- producing items using chenier on at least two occasions ensuring solder seams are free from pin holes, inclusions and excess flooding
- fabricating sample cheniers and hinges to specification on at least two occasions
- pickling, filing, finishing and polishing items using appropriate mops and compounds.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- uses of cheniers
- equipment used for chenier fabrication
- cut material requirements
- types of materials
- safety requirements for drawing of cheniers
- use of rolling equipment and techniques for rolling
- calculations and measurements for work
- procedure to anneal material and reasons why this is needed
- equipment and techniques for drawing chenier
- procedure to swage, draw and solder chenier

- use of pickling solution and safe use of solution
- procedure to fit and solder knuckles
- finishing methods
- selection and use of mops, wheels and compounds.
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Assessment Conditions

- Assessors must:
 - have vocational competency in planning and implementing chenier fabrication process at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible, assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
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