



Australian Government

MEM19034 Apply chain manufacture process

Release: 1

MEM19034 Apply chain manufacture process

Modification History

Release 1. Supersedes and is equivalent to MEM19034A Apply chain manufacture process.

Application

This unit of competency defines the skills and knowledge required to plan, construct and solder a series of chains according to required specification.

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) 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
2. Draw wire for chain	2.1 Establish and organise stages, materials, tools and equipment for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
making to size required	the fabrication process 2.2 Calculate and cut materials and draw wire to the required size 2.3 Complete required annealing of materials to relieve stress and work hardening 2.4 Draw materials to specified tolerance using appropriate equipment 2.5 Obtain and prepare resources and equipment for fabrication work
3. Fabricate jewellery chains	3.1 Produce spit jig suitable for specified chain 3.2 Produce links to the correct size and specification 3.3 Solder links free from pit holes and flooding 3.4 Construct chain links sequentially 3.5 Conduct quality assurance during construction to maintain link consistency and meet specifications
4. Finish jewellery chains	4.1 Polish and finish chains to a blemish-free high lustre 4.2 Clean up and maintain production environment, including polishing machines and tumblers, in accordance with SOPs

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.
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Environmental requirements include one or more of the following:	• liquid waste • solid waste • emissions (gas, fumes, vapour, smoke, fugitive emissions or dust) • excessive energy and water use • excessive noise.
Equipment includes one or more of the following:	• draw and jewellery benches • soldering torch • adjustable chair • pickle bath and heater • propane-oxy heating equipment • flexible drive and drill bits • spit jigs • hand tools • measuring and marking out equipment • abrasives, lubricants and compounds • round, square and fancy shaped drawplates • stock gauge rod and wire for chain links • polishing lathe with extraction, buffs, brushes and compounds • tumbler with stainless steel shot • protective clothing and equipment.
Finishing includes one or more of the following:	• finishing by files and emery • tumbling with appropriate shot • polishing on a polishing lathe using appropriate brushes and compounds.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM19034A Apply chain manufacture process.

Links

Companion Volume implementation guides are found in VETNet -

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