



Australian Government

Assessment Requirements for MEM23136 Evaluate stamping and forging tools

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM23136A Evaluate stamping and forging tools.

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:

- determining parameters and context of stamping and forging tools in manufacturing processes
- reviewing design and construction features, functions, applications and limitations of stamping and forging tools on at least two occasions
- investigating sustainability implications of stamping and forging tools and associated manufacturing processes
- identifying principles, design, analysis techniques and software, including supervisory control and data acquisition (SCADA), required to evaluate and optimise stamping and forging tools and related manufacturing processes
- evaluating work health and safety (WHS), regulatory and risk management compliance
- reporting and documenting results of evaluation.

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:

- hot and cold working and recrystallization temperature
- features and functions of stamping and forging tools in manufacturing operations
- sources of technical and professional assistance
- WHS and regulatory compliance requirements and risk management practices for stamping and forging tools and related manufacturing and maintenance processes
- sustainability and lean systems implications for stamping and forging tools and related manufacturing processes
- stamping and forging processes, plant and tooling, including:
 - shearing
 - drawing
 - impact deformation
 - other forging processes
- forged component materials including carbon, alloy and stainless steels, tool steel, copper, nickel, aluminium and titanium alloys

- stamping and forging tools general design features, functions and constraints including:
 - shearing die design
 - deep drawing tool design
 - forging die tool design
- tool manufacture processes including:
 - post-processing of computer-aided design (CAD) files
 - lathes, milling machines, grinding machines, jig borers and jig grinders
 - computer numeric control (CNC) machining
 - electro-discharge machining (EDM) and wire EDM
 - drilling and tapping
 - 'rapid' processes
 - heat treatment and surface treatments
 - finish grinding and polishing
- tool design and analysis software including:
 - CAD software
 - analysis software, mould flows, heat dissipation and software validation techniques
- systems thinking, continuous improvement, problem-solving and decision-making, and constraint and contingency management principles and techniques
- reporting and documentation requirements
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Assessment Conditions

- Assessors must:
 - have vocational competency in evaluating stamping and forging tools 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 that 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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Links

Companion Volume Implementation Guides are available on VETNet -

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