



Australian Government

Assessment Requirements for MEM04003 Operate pressure die casting machine

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM04003B Operate pressure die casting machine

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications and other applicable reference documents for operating pressure die casting machine
- starting and operating pressure die casting machine, including conducting start-up procedures and all functions of the control panel
- operating machine to produce castings and carrying out visual inspection of first-off castings and submitting for checking against specifications
- maintaining furnace at optimum operating temperature
- completing shutdown procedures.

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)
- procedures for pre-start checks
- procedures for adjusting the shot size and the effect of incorrect shot size on the quality of the die casting
- procedures for starting up the die casting machine and adjustments to be made to ensure correct operation
- removing runners from the die casting
- common faults in die castings and their probable causes
- procedures for inspecting die castings for common faults and probable causes
- checking first-off castings for conformance to specification
- shutting down the machine
- function of nitrogen and vacuum systems in the die casting process and the procedures for checking and adjusting
- function of a picking robot and the component gripper and procedures for adjusting the picking robot and effects that this can cause

- reasons for spraying the die and procedures for adjusting the die spray nozzles
- operations to be performed subsequent to die casting the product
- tools and equipment used in die casting
- methods of transporting and conveying the die cast product
- die casting process, including the effects of the adjustment of each machine control has on the quality of the die casting produced
- die casting machine operation, including operating parameters and maintenance of liquid levels
- damage that can be caused to castings through inappropriate handling and storage
- specifications of the die cast product.

Assessment Conditions

- Assessors must:
 - have vocational competency in operating pressure die casting machines 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.

Links

Companion Volume implementation guides are found in VETNet -

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