



Australian Government

Assessment Requirements for MEM08019 Electroplate protective finishes

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM08019B Electroplate protective finishes

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
- determining the correct electroplating treatment, method and process for a range of ferrous and non-ferrous components to have a protective coating applied
- selecting, setting up and using electroplating equipment and masking up components to be plated, as necessary
- carrying out the electroplating process, monitoring solutions and other parameters, adjusting as necessary to meet the specified surface finish
- cleaning and maintaining electroplating equipment, reporting any faults.

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)
- effects of plating process on different materials
- basic principles of chemistry, electro chemistry and metallurgy related to the process, including:
 - importance of maintaining satisfactory electrical contact
 - methods for detecting unsatisfactory contact
 - effects of build-up on cathode contacts
 - properties of different base materials
 - different pre-treatment processes and their application
 - process parameters and their relation to each other
 - differences between chromate conversion coatings
- types of defects, their causes and related corrective actions
- mechanical/chemical pre-treatment processes
- purpose and application of simple tests including pH and concentration
- operating parameters of solutions, including temperature, agitation rate and similar parameters

- acceptable appearances for each stage of the electroplating operation and common abnormalities
- application of different equipment to the type of work processed and correct operation and cleaning requirements, including cleaning filters
- solutions, solution compositions and operating ranges for processes relative to protective finishes, including cleaning/pre-treatment, electroplating and post-treatment
- procedures for testing plate thickness
- safe working procedures for handling chemicals relative to protective finishes and for safely adding to baths
- procedures for measuring out materials, including use of scales and volumetric measurement devices
- level of impurities and permissible limits, effects of impurities and purification procedures for protective finish solutions
- different anode arrangements, including use of baskets and bags, and conforming anodes
- correct operation of anodes and appropriate remedial action
- effect of maintenance schedules on plant performance and performance requirements and basic maintenance checks for rectifier, bus bars, agitation, heating/cooling, extraction and tank linings.

Assessment Conditions

- Assessors must:
 - have vocational competency in electroplating protective finishes 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>