



Australian Government

Assessment Requirements for PMBTECH507 Develop fibre-composite products using cored-laminate techniques

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMBTECH507B Develop fibre composite products using cored-laminate techniques

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 demonstrate the ability to:

- read and interpret test results, technical information, equipment specifications and instruments/control panels
- confirm product design specifications and regulatory framework
- identify critical materials properties and structural considerations relevant to the design objectives and the end product
- analyse information and data to specify technical requirements
- develop technical/engineering drawing of new product
- develop manufacturing specifications and procedures
- contribute technical expertise to trialling of samples
- modify designs as required based on trial results
- communicate technical information verbally and in writing
- calculate and interpret statistics, product formulae and process conditions
- apply theoretical and technical knowledge and experience of materials, process, equipment and product to anticipate and solve problems, including one (1) or more of:
 - structural optimisation
 - strength problems
 - core shearing
 - bending
 - cost
- calculate and interpret statistics, product formulae and process conditions.

Knowledge Evidence

Must provide evidence that demonstrates knowledge relevant to their job sufficient to fulfil their job role, including knowledge of:

- principal construction techniques and the technical advantages of various types
- material properties and their suitability for use as core (e.g. PVC rigid foams, PU foams, SAN foams, linear PVC foams, plywood, balsa and honeycomb materials)
- layered or laminate structural behaviour
- hand lay-up and vacuum-bagging techniques
- failure modes
- function and operating principles of composites forming equipment, machine components and ancillary equipment
- impact of temperature, pressure and time on product quality and production output
- impact of variations in raw materials and equipment operation in relation to final product
- factors which may affect product quality or production output and appropriate remedies
- organisation procedures relevant to the work environment/job role
- hierarchy of control
- hazards that may arise in the job/work environment and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be based on a holistic assessment of the evidence.
- Where the assessee does not currently possess evidence of competency in *MEM09003B Prepare basic engineering drawing*, it may be co-assessed with this unit.
- The collection of performance evidence is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use a real project in an operational workplace. Where this is not possible or where personal safety or environmental damage are limiting factors assessment must occur using 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.
- Assessment in a simulated environment should use evidence collected from demonstration of skills and one or more of:
 - walk-throughs
 - pilot plant operation
 - industry-based case studies/scenarios
 - 'what ifs'.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews.
- 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.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- In addition the assessor or anyone acting in subject matter expert role in assessment shall demonstrate both technical competency and currency. If the assessor cannot demonstrate technical competency and currency they shall assess with a subject matter expert who does meet these requirements.
- Technical competence can be demonstrated through one or more of:
 - relevant VET or other qualification/Statement of Attainment
 - appropriate workplace experience undertaking the type of work being assessed under routine and non-routine conditions
 - appropriate workplace experience supervising/evaluating the type of work being assessed under routine and non-routine conditions

- Currency can be demonstrated through one or more of:
 - being currently employed undertaking the type of work being assessed
 - being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
 - having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
 - conducting on the job training/assessments of the type of work being assessed
 - being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>