



Australian Government

PMBTECH507E Develop fibre-composite products using cored-laminate techniques

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBTECH507 Develop fibre-composite products using cored-laminate techniques.

Application

This unit covers the skills and knowledge required to develop designs for cored-laminate composite (sandwich-structured) products.

This unit applies to an experienced technician working alone or as part of a team.

The unit principally refers to the development of new sandwich-structured products using the technician's application of in-depth knowledge of materials, process, equipment and problem-solving, and the range of materials and techniques that are standard within a particular enterprise or workplace.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil.

Competency Field

Technical

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Confirm product specification	1.1 Confirm physical or structural properties and other attributes required of product from product use description 1.2 Confirm other requirements of product from product use description 1.3 Identify and apply relevant regulations, standards or codes of practice according to work health and safety regulations and workplace procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.4 Create technical drawing to determine product size and shape
2. Identify technical requirements	2.1 Determine laminate properties from product specifications 2.2 Select appropriate core materials, resin, matrix and other materials to achieve product use requirements 2.3 Determine joints, attachment points and other special features required to achieve product use requirements 2.4 Determine lay-up technique to be used to achieve product use requirements
3. Develop specification for manufacturing product	3.1 Develop accurate technical or engineering drawing of new product 3.2 Develop accurate and complete materials list for new product for product specification 3.3 Develop manufacturing procedures and specifications required to produce new product 3.4 Accurately complete required documentation
4. Produce trial samples	4.1 Liaise with production and other relevant personnel to ensure specifications and procedures are clear, complete and understood 4.2 Provide technical expertise to production team to facilitate and optimise production process during sample production 4.3 Test samples for function and quality against job specifications 4.4 Use sample results to inform design modifications where necessary to meet manufacturing and other requirements
5. Anticipate and solve process control variances	5.1 Recognise existing or potential process control variances and their causes 5.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 5.3 Monitor process control variances and corrective actions taken until resolved 5.4 Accurately maintain records and logbooks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to establish and communicate technical specifications and analyse statistical information and product formulae.
- Reading skills to interpret product use description.
- Writing and oral communication skills to produce technical drawings and specifications, support production personnel in performing trial, and record and report on process control variances.

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to PMBTECH507 Develop fibre-composite products using cored-laminate techniques.

Links

Companion Volume implementation guides are found in VETNet – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>