



Australian Government

Assessment Requirements for FWPTMM3220 Develop knowledge of glue laminated timber or cross laminated timber production

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Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 8.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has researched either glue laminated timber (GLT) or cross laminated timber (CLT) production and documented:

- legislation, standards and codes of practice relevant to GLT or CLT production
- two examples of GLT or CLT product appearance and structural grades for building and construction applications
- two examples of GLT or CLT product applications in the building and construction industry
- two advantages and two disadvantages of GLT or CLT building and construction material
- production workflow for either GLT or CLT, and two factors that may affect workflow performance
- one type of gluing system used in either GLT or CLT production
- properties and one potential hazard of two glue products used in either GLT or CLT production
- three timber characteristics required in the lamination process in GLT or CLT production to ensure joint and bond quality
- three examples of quality control check points in GLT or CLT production
- three factors that may affect lamination quality in GLT or CLT production.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- key requirements of legislation, standards and codes of practice, including National Construction Code, relevant to GLT or CLT production
- properties of GLT or CLT, including:
 - appearance grades

- structural grades
- advantages of using GLT or CLT in building and construction, including:
 - fire and seismic performance
 - insulation
 - strength to weight ratio
 - dimensional stability
 - sustainable material
 - prefabrication
 - durability
 - carbon reduction
- disadvantages of using GLT or CLT in building and construction, including:
 - cost
 - resistance to humidity
 - airtightness
- applications of GLT or CLT in building and construction, including:
 - GLT – beams, column, roof trusses
 - CLT – floors, walls, roofs, stairs
- characteristics of timber used in GLT or CLT production, including:
 - moisture content
 - visual appearance
 - structural properties
- stages involved in GLT or CLT production, including:
 - lamella production stage – pre-planing, timber grading, optimising – removal of defects, finger jointing lamellas, planing and cross-cutting
 - forming of layers and glue application stage
 - pressing stage
 - final processing stage – calibrating and cutting either lengthwise or framing
- factors impacting on workflow in GLT or CLT production, including:
 - availability of timber
 - operational, supervisory and management skills
 - access to and maintenance of GLT or CLT plant and equipment
- types, properties and hazards of glues used in GLT or CLT production, including:
 - polyurethane adhesives
 - phenol resorcinol formaldehyde adhesive
- types and applications of gluing systems
- quality control check points in GLT or CLT production process
- defects in GLT or CLT products, including:
 - delamination defects
 - non-delamination defects – stepping, incorrect finger-joint placements, incorrect lay-up

- factors that may affect lamination quality of GLT or CLT products, including:
 - moisture content
 - timber grade
 - straight and square edges and faces
 - consistent thickness
 - surface finish
 - glues and adhesives
 - curing temperature
 - pressing time
 - post-cure time
- bond strength and durability tests used in GLT or CLT production process, including how to read test data and use results
- safety and environmental hazards associated with GLT or CLT production.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- resources, equipment and materials:
 - reference materials on GLT or CLT production processes and glue and gluing systems used in GLT or CLT production processes
 - internet access and computer software and hardware for accessing technical information on GLT or CLT production
- specifications:
 - sections of National Construction Code relevant to GLT or CLT applications in building and construction.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>