



Australian Government

Department of Education, Employment and Workplace Relations

FPICOT3242B Lay up timber roof trusses

Release: 1

FPICOT3242B Lay up timber roof trusses

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to plan and set up the assembly of timber roof trusses using a truss jig or computer-operated truss table and to oversee the operation of the truss press

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3242A Lay up timber roof trusses

Application of the Unit

Application of the unit

The unit involves laying up timber roof trusses in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	1.1. Applicable occupational health and safety (OHS), environmental, legislative and organisational requirements relevant to laying up timber roof trusses are identified and followed 1.2. Work order and construction plans are reviewed and clarified with appropriate personnel 1.3. Type and quantity of material and assembly hardware to be assembled are collected 1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations 1.5. Setup jigs required for construction are specified and prepared 1.6. Communication with others is established and maintained in line with OHS requirements
2. Lay up truss	2.1. Product size and number of joints are assessed with jig area, and sections and layout are planned 2.2. Timber components are selected from pre-cut material in line with the cutting list and checked for fit 2.3. Jig components are positioned to accurately locate and support the assembly components and the jig or table is adjusted to suit 2.4. Components are positioned and clamped in jigs ready for joining with allowable faults, joins and grain in line with construction standards and grading rules 2.5. Components are set to include camber adjustments, overhang and other design requirements 2.6. Defective components are rejected and disposed of in line with site procedures and environmental requirements 2.7. Components are nailed to maintain temporary alignment during assembly
3. Control pressing operations	3.1. Assembly hardware is located and selected in line with construction plans and standards 3.2. Hardware is positioned on joints and installed in line with design specifications 3.3. Truss-pressing operations are coordinated to ensure finished product meets customer orders

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|---|--|
| | 3.4. Assembly faults are corrected in line with site procedures |
| 4. Prepare products for despatch and report | 4.1. Finished product is assessed for quality against construction standards and labelled in line with work order |
| | 4.2. Components are removed from jigs and safely stacked in a designated location in line with work order |
| | 4.3. Finished products are strapped , packed and labelled ready for transportation |
| | 4.4. Strapping waste material is minimised and dealt with in line with site procedures, manufacturer recommendations and environmental requirements |
| | 4.5. Equipment faults are recognised and reported in line with site procedures |
| | 4.6. Records and reports are accurately completed, processed and maintained in line with workplace procedures |

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level required for this unit.

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment; lay up timber roof trusses
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to measure, estimate and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; demonstrate appropriate response procedures

Required knowledge

- Applicable commonwealth, state or territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for laying up timber roof trusses

REQUIRED SKILLS AND KNOWLEDGE

- Environmental protection requirements, including the safe disposal of waste material (including preservative treated timber)
- Organisational and site standards, requirements, policies and procedures for laying up timber roof trusses
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Characteristics of timber and timber defects
- Assembly sequences and jigs
- Assembly componentry and construction standards
- Quality requirements of national building codes and standards
- Industry standard cross sections and lengths
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently lay up timber roof trusses in line with organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable commonwealth, state or territory legislative and regulatory requirements and codes of practice relevant to laying up timber roof trusses
- following organisational policies and procedures relevant to laying up timber roof trusses
- laying up timber roof trusses in line with the work order, construction plans, construction standards and engineering specifications
- stacking and strapping bundles of completed products in line with organisational requirements and OHS regulations

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package

EVIDENCE GUIDE

- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements: are to be in line with applicable commonwealth,

RANGE STATEMENT

state or territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices, including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

Environmental requirements may include:

Legislative requirements:

are to be in line with applicable commonwealth, state or territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Timber roof trusses:**
- are frames or jointed structures designed to act as a beam of long span, while each member is usually subjected to longitudinal stress only, either tension or compression
 - may include joists, rafters, purlins, chords and beams
- Work order** is to include:
- instructions for the assembly and despatch of timber and timber products from the work site
- and may include:
- construction plans or drawings
 - type of product
 - size
 - quantity
 - grade
 - instructions for the environmental monitoring of work and procedures
 - environmental care requirements relevant to the work
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients
 - colleagues
 - managers
- Material** may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - preservative treated timber
 - laminated veneer
 - coated and/or treated timber products
 - beams, including laminated beams
- Assembly hardware** may include:
- nailing plates
 - gang nails

RANGE STATEMENT

	• nail gun nails • staples
Equipment may include:	• measuring equipment • circular saws • docking saws • drills • assembly jigs • nail plate presses • staple guns • nail guns • compressor or compressed air supply • marking equipment • strapping equipment
Setup jigs	are enterprise manufactured templates that assist in the positioning of components during the assembly process
Communication may include:	• verbal and non-verbal language • constructive feedback • active listening • questioning to clarify and confirm understanding • use of positive, confident and cooperative language • use of language and concepts appropriate to individual social and cultural differences • control of tone of voice
Timber components	are the sections of timber or timber product which have been pre-cut in readiness for assembly and have been cut to follow the construction plans and cutting list
Defective components may include:	components with an unacceptable level of: • warp • wane • cupping • shakes • insect defects • knots • resin pockets
Disposing of may include:	• recycling defective components

RANGE STATEMENT

- re-using defective components
 - redirecting defective components for energy recovery
 - Assembly faults** may include:
 - incorrectly positioned joints
 - timber splits from nailing
 - incorrectly positioned hardware
 - Stacking** may include:
 - preparing for transport
 - categorising in common size and shape
 - marking lots in line with work order and site requirements
 - locating so as not to block access or passage
 - Strapping** may include:
 - securing bundles with metal or plastic strap
 - tightening and tensioning using hand-held equipment, to prevent slippage, strap breakage and damage to products
 - Dealing with** may include:
 - recycling strapping waste material
 - re-using strapping waste material
 - sending strapping waste to landfill
 - Equipment faults** may include:
 - damaged equipment components
 - electrical faults
 - Records and reports** may include:
 - product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- and may be:
- manual
 - a computer-based system
 - other appropriate organisational communication system

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical