



Australian Government

FWPCOT3225 Mechanically stress grade timber

Release: 1

FWPCOT3225 Mechanically stress grade timber

Modification History

Release	Comment
1	Replaces equivalent unit FPICOT3225B Mechanically stress grade timber, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format.

Application

This unit of competency describes the outcomes required to stress grade timber with mechanical stress graders and high speed mechanical graders to test boards for strength and durability against set grades.

The unit applies to those who mechanically stress grade timber in a wood products factory setting and includes operator maintenance.

No licensing, legislative, regulatory, or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Sawmilling and Processing

Timber Manufactured Products

Wood Panel Products

Elements and Performance Criteria

<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.</i>
1. Prepare for stress-grading	1.1 Review work order and where required check with appropriate personnel. 1.2 Select appropriate personal protective equipment and check for operational effectiveness.

	1.3 Obtain type and quantity of timber for stress grading from storage location. 1.4 Plan stress-grading process in line with work order.
2. Set up equipment	2.1 Use equipment in line with organisational safety procedures, manufacturer's instructions and environmental protection practices. 2.2 Complete pre start-up checks on equipment to ensure operational effectiveness. 2.3 Set up spray guns or branding rolls for use in line with work order. 2.4 Complete calibration process using verification boards and set grade thresholds in line with organisational procedures.
3. Stress grade timber	3.1 Complete automatic grading process, monitor and adjust material flow to machine. 3.2 Monitor machinery to ensure consistent grade marking and board appearance in line with industry standards. 3.3 Withdraw samples for independent testing and prepare according to testing procedures.
4. Complete operator maintenance	4.1 Follow organisational safety procedures to lock out equipment. 4.2 Check and clean photo-electric cells and reflectors in line with environmental protection practices. 4.3 Check and refill spray guns or branding rolls. 4.4 Adjust and maintain mechanical stress grade rollers, auto-feed and load pressure in line with manufacturer's recommendations. 4.5 Keep stress-grading area clear of dust and debris in line with organisational safety procedures. 4.6 Record and report production outcomes, equipment faults and maintenance requirements to appropriate personnel.

Foundation Skills

This section describes those core and employment skills that are essential to performance and are not explicit in the performance criteria.

Numeracy skills to:	- identify quantities of timber required within work orders and count numbers of timber boards to be graded - calibrate mechanical stress grading equipment to specified grade thresholds.
Oral communication	ask questions and actively listen to clarify contents of work orders where necessary

skills to:	
Reading skills to:	• interpret: • workplace health and safety and other organisational procedures • work orders • manufacturers' instructions and maintenance recommendations.
Writing skills to:	• complete accurate basic records for production outcomes, equipment faults and maintenance requirements.
Planning and organising skills to:	• logically sequence the stages of preparation and stress grading work using work order to guide activities.

Range of Conditions

Not Applicable

Unit Mapping Information

FPICOT3225B Mechanically stress grade timber

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPCOT3225 Mechanically stress grade timber

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1	Replaces equivalent unit FPICOT3225B Mechanically stress grade timber, which was first released with FPI11 Forest and Forest Products Training Package Version 2.2. This is the first release of this unit in the new standards format. Assessment requirements now specify the performance and knowledge evidence, as well as assessment conditions for this unit of competency. These sections simplify and replace components used in the previous unit format, including 'Required Skills and Knowledge, Evidence Guide and Range Statement

Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. If a specific volume or frequency is not stated below, then evidence must be provided that the following requirements have been performed on at least one occasion:

- operate a mechanical stress grading machine, in line with work orders, to grade the following types of timber boards:
- native timber species
- imported timber species
- dressed timber
- in-the-rough timber
- preservative treated timber
- complete operator maintenance on the mechanical stress grading equipment.

Knowledge Evidence

A person competent in this unit must be able to demonstrate knowledge of:

- typical flow of material supply in and out of the grading area
- typical work flow processes and techniques used to mechanically stress grade timber
- range of industry standard strength grades and thresholds and applicable terminology
- markings used on timber boards to identify grades
- reason for independent testing of boards and processes for sampling and preparing boards for testing
- purpose, features and operation of equipment used to mechanically stress grade timber:
 - mechanical stress-graders or high speed mechanical graders

- spray guns
- branding rolls
- verification boards
- methods used to:
 - calibrate equipment to grades using verification boards
 - clean and maintain mechanical stress grading equipment
- organisational procedures specific to mechanically stress grading timber:
 - workplace health and safety with particular emphasis on equipment lock out, use of personal protective equipment and handling hazardous substances
 - communication reporting lines
 - recording and reporting production outcomes, equipment faults and maintenance requirements
- environmental protection practices for forest products factory settings:
 - reducing water and energy use
 - cleaning plant, tools and equipment
 - disposing of hazardous substances.
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Assessment Conditions

The following resources must be made available:

- mechanical stress-graders or high speed mechanical graders
- spray guns
- branding rolls
- maintenance tools and equipment for mechanical stress graders
- verification boards
- consumable dye
- personal protective equipment suitable for mechanically stress grading timber
- a diverse range of commercial timber:
 - native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - preservative treated timber
- manufacturers' instructions for use and maintenance of equipment
- work order with specific instructions for types and quantities of timber to be graded
- template documents for recording production outcomes, equipment faults and maintenance requirements

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessor requirements

Assessors must:

- hold the appropriate assessor competency standards as outlined in regulations; and
- be able to demonstrate vocational competencies at least to the level being assessed; and
- be able to demonstrate how they are continuing to develop their VET knowledge and skills as well as maintaining their industry currency and assessor competence.

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