



Australian Government

FWPCOT3296 Mechanically stress grade timber

Release: 1

FWPCOT3296 Mechanically stress grade timber

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to stress grade timber with mechanical stress-grading machines or high-speed mechanical graders to test the product for strength and durability against set grades.

The unit applies to individuals who mechanically stress grade timber in the timber and wood products industry.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Common Technical (COT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for stress-grading	1.1 Review work order to determine job requirements and, where required, seek clarification from appropriate personnel 1.2 Review environmental protection procedures and workplace health and safety requirements, including use of personal protective equipment, equipment lock-out and safe manual handling techniques

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify, assess and take actions to mitigate risks and hazards associated with mechanically stress-grading timber 1.4 Identify and implement workplace procedures for minimising and disposing of waste material, cleaning plant, tools and equipment, and maximising energy efficiency 1.5 Obtain type and quantity of timber for stress-grading from storage location
2. Set up equipment	2.1 Select and use equipment according to workplace safety procedures, manufacturer 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 according to work order 2.4 Complete calibration process using verification boards, and set grade thresholds according to workplace 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 according to industry standards 3.3 Withdraw samples for independent testing and prepare according to testing procedures
4. Complete operator maintenance	4.1 Lock out equipment according to workplace safety procedures 4.2 Check and clean photoelectric cells and reflectors according to manufacturer procedures and environment 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 according manufacturer recommendations 4.5 Keep stress-grading area clear of dust and debris according to workplace safety procedures 4.6 Record and report production outcomes, equipment faults and maintenance requirements to appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Extracts key information from operational manuals to determine safe operating procedures for equipment
Writing	Prepares routine written reports using required format, language and structure
Oral communication	Employs active listening and questioning to clarify content of work orders
Numeracy	- Identifies quantities of timber required within work orders, and counts numbers of timber boards to be graded - Calibrates mechanical stress-grading equipment to specified grade thresholds
Navigate the world of work	Understands main tasks, responsibilities and boundaries of own role
Interact with others	Uses modes of communication suitable to purpose to confirm and clarify understanding
Get the work done	Recognises and responds to routine problems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3296 Mechanically stress grade timber	FWPCOT3225 Mechanically stress grade timber	Updated performance criteria to match knowledge evidence regarding workplace health and safety requirements; updated foundation skills	Equivalent unit

Links

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

Assessment Requirements for FWPCOT3296 Mechanically stress grade timber

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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, on at least one occasion, mechanically stress graded timber, and has:

- followed work order and relevant workplace health and safety and environmental protection procedures
- operated a mechanical stress-grading machine or high-speed stress-grading machine according to work orders to grade one or more of the following types of timber products:
 - timber from native species
 - timber from imported species
 - dressed timber
 - in-the-rough timber
 - preservative treated timber
- completed operator maintenance on the mechanical stress-grading equipment
- recorded and reported production outcomes, equipment faults and maintenance requirements to appropriate personnel.

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:

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

- mechanical stress graders or high-speed mechanical graders
- spray guns
- branding rolls
- verification boards
- methods used to:
 - calibrate equipment to grades using verification timber boards
 - clean and maintain mechanical stress-grading equipment
- workplace procedures specific to mechanically stress-grading timber:
 - workplace health and safety, with particular emphasis on equipment lock-out, use of personal protective equipment (PPE), safe manual handling techniques and handling hazardous substances
 - communication reporting lines
 - recording and reporting production outcomes, equipment faults and maintenance requirements
- environmental protection practices for timber processing plants:
 - reducing water and energy use
 - cleaning plant, tools and equipment
 - disposing of hazardous substances.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a timber processing plant or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - mechanical stress graders or high-speed mechanical graders
 - spray guns
 - branding rolls
 - verification boards
 - PPE suitable for mechanically stress-grading timber
 - timber boards suitable for mechanically stress-grading and sufficient quantities for the grading operation
- specifications:
 - manufacturer 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.

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

Links

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