



Australian Government

Department of Education, Employment and Workplace Relations

FPICOT3240B Grade heavy structural/engineered products

Release: 1

FPICOT3240B Grade heavy structural/engineered products

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit specifies the outcomes required to visually evaluate material characteristics and defects for classification into various strength and appearance grades. It includes classifying sleepers, crossings, mine guides and other heavy structural or engineered products in line with grade

This unit replaces FPICOT3240A Grade heavy structural/engineered products

Application of the Unit

Application of the unit

This unit involves grading heavy structural/engineered products in a forest environment setting

These skills and knowledge required for are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Not Applicable

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 grading	<p>1.1. Applicable <i>occupational health and safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to grading heavy structural or engineered products are identified and followed</p> <p>1.2. <i>Work order</i> is reviewed and clarified with <i>appropriate personnel</i></p> <p>1.3. Type and quantity of <i>engineered products</i> to be <i>graded</i> are acquired from the <i>storage</i> location</p> <p>1.4. <i>Equipment</i> is selected appropriate to work requirements and checked for operational effectiveness in line with manufacturer recommendations</p> <p>1.5. Grading process is planned in line with site procedures</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Grade heavy structural or engineered products	<p>2.1. Timber requirements for storage or subsequent processing operations are selected</p> <p>2.2. Timber characteristics and <i>defects</i> of each piece of timber are evaluated against industry standards for grade type</p> <p>2.3. <i>Moisture content</i> is measured, recorded and reported</p> <p>2.4. Defects are clearly marked for docking in line with site requirements</p> <p>2.5. Timber is marked and sorted in line with its grade classification, using markers or stickers that are clearly understood</p> <p>2.6. Grading outcomes and distribution problems are <i>recorded and reported</i> in line with workplace procedures</p>
3. Distribute material	<p>3.1. Material is directed and moved to storage or processing operations in line with site requirements</p> <p>3.2. Sub-standard material is rejected and <i>disposed of</i> in line with site requirements</p> <p>3.3. <i>On-site movement of material</i> is monitored to ensure intended flow is achieved</p> <p>3.4. Storage locations are labelled in line with site systems</p>

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; accurately grade heavy structural or engineered products; evaluate timber characteristics
- 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 moisture content, 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 grading heavy structural or engineered products
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for grading heavy structural or engineered products
- Environmental risks and hazards
- Criteria for recycling and re-using timber or material with defects and sub-standard timber or material
- Methods of visual estimation, grading, colour identification and tagging
- Heavy structural or engineered products and their use
- Sorting, marking and distribution processes
- Industry standard cross sections and lengths
- Storage systems and labelling procedures
- 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 grade heavy structural or engineered products according to 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 grading heavy structural or engineered products
- following organisational policies and procedures relevant to grading heavy structural or engineered products
- communicating and working safely with others in the work area
- grading heavy structural or engineered products to the appropriate standard
- measuring moisture content and identifying defects and characteristics in timber
- distributing material on site using designated equipment

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

EVIDENCE GUIDE

Method of assessment

- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- 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. **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

RANGE STATEMENT

regional contexts) may also be included.

OHS requirements:

are to be in line with applicable commonwealth, 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

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

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

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- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use, maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Work order is to include:

instructions for:

- receiving, despatching and grading
- sorting and marking heavy structural or engineered products to and from the designated storage location or processing

and may include:

- type
- size
- quantity
- 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

Engineered products may include:

- sleepers, crossings, mine guides, piles and cross arms for overhead lines
- decking for wharves and bridges
- poles
- other heavy structural or engineered products

Grading

is visually evaluating timber characteristics and defects for classification into various strength and appearance grades

Storage may include:

- storage racks
- storage bays
- bins
- stacks

RANGE STATEMENT

- pallet boxes
- modularised storage components
- temporary stacking bays (stand, frame or ground)

and may be divided into:

- standard product classification
- product designation
- size
- dimension
- stack number
- weight
- grade
- shelf life
- stock rotation position

Equipment may include:

- moisture meters
- lifting equipment for the movement of material

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

Defects may include:

- warp
- wane
- cupping
- shakes
- insect defects
- knots
- resin pockets

Moisture content

is the amount of moisture maintained in timber or timber products after kiln drying or panel production to avoid cracking and deforming

Records and reports may include:

- product type and size
- inspection information
- grading and labelling outcomes

RANGE STATEMENT

- storage locations
- quality outcomes
- hazards
- incidents
- equipment malfunctions

and may be:

- manual
- a computer-based system
- other appropriate organisational communication system

Disposing of may include:

- recycling sub-standard material
- re-using sub-standard material
- redirecting sub-standard material for energy recovery

On-site movement of material may include:

the use of:

- conveyor belt systems
- track systems
- lifting equipment

lifting equipment, such as:

- fork lifts
- slings
- trolley jacks
- gantry cranes
- loaders

assistance with lifting, such as:

- involving two or more personnel to lift materials manually or to guide the movement of mechanical equipment

Unit Sector(s)

Not Applicable

Competency field

Competency field

Common Technical