



Australian Government

FWPSAW3228 Apply principles of blade design to sawing procedures

Release: 2

FWPSAW3228 Apply principles of blade design to sawing procedures

Modification History

Release	Comments
Release 2	This version released with FWP Forest and Wood Products Training Package Version 3.0.
Release 1	This version released with FWP Forest and Wood Products Training Package Version 2.0.

Application

This unit of competency describes the outcomes required to maintain quality output by selecting blades for various sawing operations and by applying principles of blade design. Work is completed in a forest and wood products factory

The unit applies to Sawmill Worker, Sawyer, Production Worker.

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

Elements and Performance Criteria

Element	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. Maintain quality output	1.1 Follow quality system procedures for use and care of blades. 1.2 Assess blades visually for defects before processing products and completing work.
2. Apply blade	2.1 Classify blades, according to type and style suitable for different

design principles	saws and production requirements. 2.2 Identify and evaluate blade characteristics, properties and design capacities according to manufacturer's specifications and production requirements. 2.3 Select blades to suit material being cut and production requirements. 2.4 Plan sawing to minimise blade damage and wear and optimise blade lifespan.
3. Assess blade condition.	3.1 Identify machinery and equipment issues that can cause product waste and adversely affect blade lifespan; resolve during day to day activities. 3.2 Assess saw blade condition and recognise need to rectify blade wear and damage. 3.3 Record and report blade faults to appropriate personnel according to blade design specifications.

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:	measure blade characteristics for different blade types.
Reading skills to:	- interpret: - organisational quality system procedures - manufacturers' blade specifications and maintenance recommendations.
Writing skills to:	complete accurate basic records for blade faults.
Planning and organising skills to:	plan use of blades according to work activities.
Problem-solving skills to:	- identify machining problems and resolve to avoid blade damage - identify and report blade wear, damage and faults.
Technology skills to:	select appropriate blades to suit materials and production requirements.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPSAW3228 Apply principles of blade design to sawing procedures Release 2	FWPSAW3228 Apply principles of blade design to sawing procedures Release 1	Minor typographical errors corrected.	Equivalent unit

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 FWPSAW3228 Apply principles of blade design to sawing procedures

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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:

- follow organisational policies and procedures relevant to applying principles of blade design to sawing procedures
- select blades for sawing procedures in line with environmental legislation and workplace procedures
- identify and evaluate blade characteristics, properties and design capacities for these types of blades:
 - circular saw blades
 - band saw blades
 - gang saw blades
 - wide saw blades
 - standard steel
 - tungsten tipped
 - stellite tipped
- assess saw blade condition and complete basic records of faults for each of the above types of blades
- select appropriate blades to suit material being cut and production requirements in line with three work orders.

Knowledge Evidence

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

- purpose, features and operation of blades:

- circular saw blades
- band saw blades
- gang saw blades
- wide saw blades
- standard steel
- tungsten tipped
- stellite tipped
- properties of blades used in the forestry industry:
 - metal from which blades are made
 - tensile strength
 - geometry and concentricity
- characteristics of blades and names of different parts:
 - blade pitch
 - kerf
 - gullet
 - face
 - set
 - straightness
 - profile
 - angle
 - depth
 - teeth shape
 - application (cross cut or ripping)
 - number of teeth per metre
- methods to optimise the use of saw blades
- effects of different types of materials on saw blade wear
- typical machinery and equipment issues that can cause product waste and adversely affect blade lifespan
- methods for assessing saw blade condition
- organisational quality system procedures for use and care of blades.

Assessment Conditions

The following resources must be made available:

- blades for:
 - circular saws
 - band saws
 - gang saws
 - wide saws
- these styles of blade:

- standard steel
- tungsten tipped
- stellite tipped
- maintenance tools and equipment for blades
- personal protective equipment suitable for maintaining blades
- manufacturers' specifications for blade use and recommendations for repairing and maintaining blades
- template documents for recording blade faults
- relevant personnel for the purposes of communicating information
- work orders with specific information on materials to be cut and production requirements
- organisational quality system procedures for use and care of blades.

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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