



Australian Government

FWPCOT3334 Conduct steam boiler operations

Release: 1

FWPCOT3334 Conduct steam boiler operations

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 8.0.

Application

This unit of competency describes the skills and knowledge required to prepare for, start up, monitor, shut down and store a steam-generating boiler.

The unit applies to individuals who operate steam boilers in a timber or wood products production facility.

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.

This unit should not be used where the boiler equipment falls under the category for which a high risk work licence is required. Users are advised to check with the relevant regulatory authority for appropriate unit and licensing requirements.

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 steam boiler operations	1.1 Determine job requirements from work order and, where required, check with appropriate personnel 1.2 Confirm workplace health and safety and environmental protection

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	practices and/or procedures and emergency procedures for tasks 1.3 Identify and assess hazards and take actions to mitigate risks related to steam boiler operations 1.4 Select and use appropriate personal protective equipment and check for operational effectiveness 1.5 Identify and set quantity of steam to be generated for allocated process as specified in work order 1.6 Check boiler house chemicals for correct labelling to ensure compliance with safety and regulatory requirements 1.7 Complete pre-operational safety and pre-start-up checks to ensure operational effectiveness of boiler
2. Start up and monitor boiler	2.1 Start boiler according to workplace procedures 2.2 Assess boiler condition for anomalies during start-up, and rectify or report to relevant personnel according to workplace procedures 2.3 Monitor boiler operation, diagnose status and adjust to maintain safe and efficient operation 2.4 Store and record boiler house chemicals according to workplace safety and environmental protection practices and/or procedures 2.5 Shut down boiler in cases of fire according to emergency procedure 2.6 Record and report boiler operation and fuel efficiency to appropriate personnel
3. Shut down, inspect and store boiler	3.1 Isolate and shut down boiler according to workplace safety procedures 3.2 Prepare boiler for periodic internal and external inspection according to workplace procedures and manufacturer instructions 3.3 Inspect and test boiler regularly according to workplace boiler inspection and maintenance program 3.4 Remove valves and fittings according to workplace procedures and manufacturer requirements, if required 3.5 Clean boiler externally and internally, as required, according to workplace procedures, environmental protection requirements and manufacturer instructions 3.6 Select storage mode and store boiler according to workplace procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	3.7 Record and report 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	Interpret information from workplace procedures and documents, including Safety Data Sheets and chemical labels
Writing	Complete routine records for boiler operations, equipment faults and maintenance requirements
Oral communication	Ask questions and actively listen to clarify contents of operational orders
Numeracy	- Interpret basic numerical machine settings, gauges and data recording equipment - Record numerical data involving fuel efficiency - Calculate approximate heating requirements and volumes of steam - Measure and record chemical usage

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPCOT3334 Conduct steam boiler operations	FWPCOT3231 Operate steam boiler	Redesigned unit that includes content from FWPCOT3231 Operate steam boiler and FWPCOT4206 Plan and coordinate boiler operations	Not equivalent
FWPCOT3334 Conduct steam boiler	FWPCOT4206 Plan and coordinate boiler	Redesigned unit that includes content from	Not equivalent

operations	operations	FWPCOT3231 Operate steam boiler and FWPCOT4206 Plan and coordinate boiler operations	
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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 FWPCOT3334 Conduct steam boiler operations

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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 prepared for, started up, monitored and shut down a steam boiler in a timber or wood products production facility for two production cycles with different specified energy generation requirements.

In performing this task, the individual has:

- followed workplace health and safety and environmental protection practices and/or procedures
- conducted pre-operational checks on steam boiler
- diagnosed and adjusted control settings during operation
- identified and rectified boiler operating faults
- handled and labelled boiler house chemicals correctly
- prepared steam boiler for periodic inspection
- completed operational and maintenance reports.

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:

- environmental protection requirements and practices for boiler operations, including:
 - cleaning plant, tools and equipment
 - disposing of hazardous substances
- characteristics and dangers of steam
- purpose, features and operation of:
 - steam-generating boilers, including liquid or vapour restricted to water or steam
 - fuel and fuel supply system
- energy generation capacity of workplace steam boilers
- processes for boiler start-up, shutdown, cleaning and storage

- range of data used to evaluate boiler performance, including:
 - steam levels
 - pressure levels
 - energy generation levels
 - heat build-up
 - system overload information
 - test outcomes for water quality and chemicals
 - past performance records
- types, uses and labelling of boiler house chemicals, including safe handling and storage
- methods used to:
 - remove valves and fittings
 - clean boilers internally and externally
 - monitor operation and diagnose status of steam boiler
 - inspect boilers after shutdown
- workplace procedures specific to operating steam boilers, including:
 - boiler inspection and maintenance
 - health and safety, with particular emphasis on shutdown, equipment lock-out and use of personal protective equipment
 - communication reporting lines
 - recording and reporting on operational and fuel efficiency data, equipment faults and maintenance requirements.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a timber processing plant, a timber manufacturing plant or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - steam-generating boiler
 - fuel and fuel supply system
 - boiler house chemicals and labels
 - valves and tools for replacing valves
 - personal protective equipment suitable for operating steam boilers
- specifications:
 - workplace procedures for steam boiler operations
 - templates for documenting relevant information on steam boiler operations
 - manufacturer safety data sheets for chemicals used in steam boiler operations
 - workplace health and safety and environmental protection policies and/or procedures applicable to boiler operations.

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

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