



Australian Government

PPMSTM330 Shut down and bank steam boiler

Release: 2

PPMSTM330 Shut down and bank steam boiler

Modification History

Release	Comments
Release 2	This version released with PPM Pulp and Paper Manufacturing Training Package Version 2.0.
Release 1	This version released with PPM Pulp and Paper Manufacturing Training Package Version 1.0.

Application

This unit of competency describes the skills and knowledge required to shut down steam boilers in planned, unplanned and emergency situations and to inspect, maintain and store boilers.

The unit applies to production operators and technicians who shut down and bank steams boilers in a pulp or paper manufacturing facility. This typically involves working in a facility with complex integrated equipment and continuous operations.

No licensing, legislative or certification requirements apply to this unit at the time of publication. Where the boiler equipment falls under the category for which a High Risk Work Licence is required, this unit should not be used and the appropriate unit should be sought.

Pre-requisite Unit

Nil

Unit Sector

Steam generation (STM)

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. Shut down, inspect and maintain boiler	1.1 Initiate appropriate isolations and shut down boiler and ancillary plant following workplace health and safety and standard operating procedures (SOP)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Prepare boiler for inspection 1.3 Establish condition of boiler to ensure safe removal of equipment 1.4 Inspect boiler and complete routine preventative maintenance 1.5 Clean boiler internally and externally in line with environmental protection practices 1.6 Record and report maintenance requirements 1.7 Select, fit, use and maintain personal protective equipment according to job requirements and task to be undertaken
2. Store boiler in shutdown mode	2.1 Establish storage time and condition of storage 2.2 Store boiler in safe condition for access in line with manufacturer's specifications 2.3 Analyse stored boiler water and chemicals when boiler is stored for extended periods
3. Respond to unplanned or emergency shutdowns	3.1 Respond to shutdown requirement immediately 3.2 Follow organisational safety procedures to maintain safety of personnel and plant during emergency shutdown situations 3.3 Identify and locate cause of shutdown 3.4 Monitor and maintain continuing plant operation in safe working mode 3.5 Notify relevant personnel to rectify and make plant ready for restart
4. Record and report shutdown data	4.1 Record shutdown and corrective action processes 4.2 Report shutdown information to relevant 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 detailed familiar workplace health and safety and SOP

Skill	Description
Writing	Complete accurate basic records for shutdown processes and maintenance requirements
Numeracy	Interpret basic numerical settings on instruments and gauges involving pressures, flows and temperatures
Get the work done	Use and assess sensory information (sight, sound, touch, smell, vibration, temperature) to respond to boiler faults

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
PPMSTM330 Shut down and bank steam boiler Release 2	PPMSTM330 Shut down and bank steam boiler Release 1	Performance criteria added, minor changes to knowledge evidence, minor change to licensing statement	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=12998f8d-d0ac-40bc-a69e-72a600d4fd93>

Assessment Requirements for PPMSTM330 Shut down and bank steam boiler

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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:

- coordinated planned shutdowns of a steam boiler, at least twice in line with required enterprise intervals, and completed the following tasks after shutdown:
 - inspected the boiler and completed routine preventative maintenance
 - cleaned the boiler internally and externally
 - analysed stored boiler water and chemicals
 - completed basic records for shutdown processes and maintenance requirements
- responded to unplanned or emergency shutdowns, which can be a real time event or by scenario, and implemented responses appropriate to the cause and completed a basic report on corrective action processes.

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:

- organisational procedures relevant to workplace health and safety with particular emphasis on:
 - use of personal protective equipment (PPE)
 - equipment lock out and isolation procedures
 - handling chemicals and hazardous substances, including spill and disposal guidelines
 - plant clearance requirements
 - emergency procedures and responses
 - job safety analysis documentation and processes
 - plant permit systems and processes

- high risk load shifting licensing requirements where relevant
- major hazard facility requirements where relevant
- boiler plant layout
- purpose, features and operation of these types of boilers and associated fuel types and delivery systems:
 - fire tube
 - water tube
- operation and application of electronic and other control systems
- boiler water treatment system and reasons for treatment
- purpose of, and processes for analysing stored boiler water and chemicals
- key features and purpose of equipment required to shut down and store a steam boiler
- types, causes and effects of, and required emergency and other responses to, unplanned boiler shutdowns:
 - power outage
 - mechanical breakdown
 - blockages
 - jamming
 - air supply
 - control system failure
- methods used to:
 - test boiler operations and diagnose faults
 - clean boilers internally and externally
- organisational procedures:
 - standard operating procedures (SOP) specific to boiler shutdown
 - communication reporting lines
 - recording and reporting shutdown processes and maintenance requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or a productive environment that accurately reflects performance in a workplace
- resources, equipment and materials:
 - a boiler which can be fire or water tube type
 - fully automated, semi-automated, manually operated plant and equipment required for shutting down boiler operation in a pulp or paper manufacturing facility
 - testing equipment for boiler water and chemicals
 - maintenance tools and equipment and consumables for boilers
 - PPE suitable for maintaining and shutting down a boiler
- specifications:

- template documents for recording shutdown processes and maintenance requirements
- organisational workplace health and safety and SOPs for boiler shutdown.

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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