



Australian Government

Assessment Requirements for PPMEPG440 Troubleshoot and rectify power generation system

Release: 2

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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.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria of this unit. There must be evidence that the individual has:

- identified, diagnosed and rectified faults in plant, equipment and processes relevant to power generation systems at least twice in line with required enterprise intervals
- selected and used appropriate troubleshooting methods for power generation systems
- read and interpreted documentation, procedures and reports relevant to troubleshooting and power generation systems
- communicated effectively and worked safely with others, in the work area when troubleshooting and rectifying power generation systems.

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

- troubleshooting methods applicable to the operation power generation systems
- documentation and procedures relevant to troubleshooting and rectifying power generation systems in the pulp and paper industry including:
 - standard operating procedures (SOP)
 - productivity requirements
 - quality procedures
 - environmental sustainability requirements/practices
 - machinery and plant manufacturing operating manuals
 - enterprise policies and procedures
 - operational logs and reports
 - maintenance logs
 - safety data sheets
 - process and instrument diagrams
- power generation systems, processes and associated services sufficient to troubleshoot including:
 - plant layout
 - theory of operation
 - causes and effects of adjustments made to power generation system and processes
- relationships between power generation system and associated services
- sampling and testing for plant and system operations, and process steam supply monitoring – purpose, standards and procedures as per site agreements
- types, causes and effects of power distribution systems and power generation plant shutdowns
- effect of steam quality on turbine operation
- operational tolerances of the turbine system and the effect of operating outside these tolerances
- AC/DC generation principles
- output control and regulation principles
- power factor characteristics, effects and correction techniques
- electrical isolation procedures
- principles of operation of transformers and circuit protection systems
- electronic and other control systems, operation and application to make appropriate adjustments that control power generation systems.

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:

- access to the full range of equipment involved in integrated continuous manufacturing of power generation systems in a pulp or paper manufacturing facility, including chemical products and systems
- electronic control systems which includes digital control system, touch screens or robotics
- maintenance tools and equipment and consumables for power generation systems
- PPE suitable for troubleshooting power generation systems
- specifications:
 - sample workplace documentation, procedures and reports including SOP, quality procedures, environmental sustainability requirements/practices, plant manufacturing operating manuals, enterprise policies and procedures, plant isolation documentation, safe work documentation including plant clearance, job safety analysis, permit systems
 - local power authority regulations for starting up power generation systems
 - details of production requirements to plan power generation levels
 - template operating log for recording troubleshooting processes and power generation performance
 - relevant personnel for the purposes of communicating information
 - organisational workplace health and safety and SOP for power generation system.

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

Links

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