



Australian Government

Assessment Requirements for PPMEPG401 Troubleshoot and rectify power generation system

Release: 1

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Modification History

Release	Comments
Release 1	This version released with PPM Pulp and Paper Manufacturing Training Package Version 3.0.

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 identified, diagnosed and rectified faults in plant, equipment and processes relevant to power generation systems on at least two occasions according to operational requirements, including for each occasion:

- selected and used appropriate troubleshooting methods to identify plant, equipment and process faults
- diagnosed causes and sources of faults on system and associated processes
- communicated effectively and worked safely with others when undertaking troubleshooting and rectification activities
- completed accurate, detailed records on troubleshooting and rectification activities and actions undertaken.

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:

- workplace and legislative health and safety requirements and risk measures relevant to operating, troubleshooting and rectifying power generation systems, including emergency procedures, handling chemical and hazardous substances, high risk load shifting, licensing requirements, plant clearance and permit systems
- environmental requirements relevant to power generation systems
- troubleshooting methods applicable to the operation of power generation systems, including disposal procedures
- manufacturer specifications and operating procedures for power generation systems, including shutdown and electrical isolation procedures
- 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
- 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
- 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 the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a manufacturing facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - power generation system, including chemical products
 - electronic control systems that include digital control system, touch screens or robotics
 - tools, equipment and consumables used to troubleshoot and rectify power generation systems
 - personal protective equipment required for troubleshooting power generation systems
 - proforma or recording system for recording diagnostic and corrective action processes
- specifications:
 - workplace and standard operating procedures relating to troubleshooting and rectifying power generation systems, including health and safety, environmental risks and hazards identification, plant isolation and quality requirements
 - manufacturer specifications and operating procedures
- relationships:
 - relevant personnel for the purposes of communicating information.

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.gov.au/Pages/TrainingDocs.aspx?q=12998f8d-d0ac-40bc-a69e-72a600d4fd93>