



**Australian Government**

# **PPMDEO401 Troubleshoot and rectify dry end systems**

**Release: 1**

# PPMDEO401 Troubleshoot and rectify dry end systems

## Modification History

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

## Application

This unit of competency describes the skills and knowledge required to identify, diagnose, rectify and report on dry end systems in the pulp and paper industry.

This unit applies to senior operators and production specialists who troubleshoot and provide solutions to dry end system problems in a paper manufacturing facility.

Dry end operations cover a range of systems and subsystems, including drying processes, reeling operations, chemical additive system, monitoring systems, sheet treatment processes, tail feed systems, broke system, on-line coating and coated paper systems, calendering systems, vacuum systems, laser systems, slitter systems, sheet transfer systems, accumulator and cleaning showers.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

Nil

## Unit Sector

Dry End Operations (DEO)

## 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. Identify and analyse causes of systems and quality faults | 1.1 Prepare for rectification of dry end operations according to productivity requirements and workplace health and safety and environmental procedures<br>1.2 Identify safety hazards and determine risk control measures with |

| Elements                                                          | Performance Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>                  | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                   | <p>relevant personnel</p> <p>1.3 Interpret alarm systems and make observations to determine faults and location</p> <p>1.4 Identify faults through routine physical inspections of plant, processes and equipment</p> <p>1.5 Conduct systemic sampling and testing, and interpret results to identify variations from operating procedures</p> <p>1.6 Access and interpret relevant sources of information, and check for recent work undertaken to assist analysis</p> <p>1.7 Analyse collected information to identify cause and source of problem</p> <p>1.8 Report fault and proposed corrective actions to relevant personnel</p> |
| 2. Rectify system and equipment faults                            | <p>2.1 Shut down and isolate system according to workplace health and safety and operating procedures</p> <p>2.2 Repair or replace faulty equipment and undertake appropriate adjustments and rectification according to equipment specifications</p> <p>2.3 Implement corrective operational adjustments and maintenance requirements according to operating procedures</p> <p>2.4 Restore normal operations and communicate to relevant personnel</p>                                                                                                                                                                                |
| 3. Rectify product quality faults                                 | <p>3.1 Conduct further tests for identified product faults or variations as required</p> <p>3.2 Interpret test results and adjust processes to correct variations from specifications</p> <p>3.3 Manage out-of-specification production to ensure quality output</p>                                                                                                                                                                                                                                                                                                                                                                   |
| 4. Record and report troubleshooting and rectification activities | <p>4.1 Document process and product faults according to workplace requirements</p> <p>4.2 Record and report diagnostic and corrective action processes to relevant personnel</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## 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            | <ul style="list-style-type: none"> <li>Interpret information from a range of documentation</li> </ul>                                                                                                                                                                                                                         |
| Writing            | <ul style="list-style-type: none"> <li>Complete accurate detailed records and reports for system and product faults, diagnostic and corrective action processes using the required format</li> </ul>                                                                                                                          |
| Oral communication | <ul style="list-style-type: none"> <li>Provide comprehensive information about problems with equipment and products using clear language and industry terminology</li> <li>Provide clear, unambiguous information about return to normal operations to system operators and other personnel</li> </ul>                        |
| Numeracy           | <ul style="list-style-type: none"> <li>Interpret numerical settings on instruments, gauges and data recording equipment</li> <li>Interpret system and product data</li> <li>Record detailed numerical data for system and product test results</li> <li>Use measuring equipment to measure and inform calculations</li> </ul> |

## Unit Mapping Information

| Code and title current version                        | Code and title previous version                             | Comments                                                                                                                                                                                                  | Equivalence status |
|-------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| PPMDEO401<br>Troubleshoot and rectify dry end systems | PPMDEO440<br>Troubleshoot and rectify dry end systems       | Merged unit<br><br>Changes to elements, performance criteria, foundation skills, performance evidence and knowledge evidence<br><br>Assessment conditions updated<br><br>Addresses coated paper processes | Not equivalent     |
| PPMDEO401<br>Troubleshoot and rectify dry end systems | PPMCP440<br>Troubleshoot and rectify coated paper processes | Merged unit<br><br>Changes to elements, performance criteria, foundation skills,                                                                                                                          | Not equivalent     |

| Code and title<br>current version | Code and title<br>previous version | Comments                                                                               | Equivalence status |
|-----------------------------------|------------------------------------|----------------------------------------------------------------------------------------|--------------------|
|                                   |                                    | performance evidence and<br>knowledge evidence<br><br>Assessment conditions<br>updated |                    |

## 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 PPMDEO401 Troubleshoot and rectify dry end systems

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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 carried out troubleshooting and rectification activities for dry end systems on at least two occasions according to operational requirements, including for each occasion:

- selected and used appropriate troubleshooting and testing methods to identify system and product quality faults
- diagnosed causes and sources of faults on system and associated processes
- identified and taken timely corrective action to rectify and maximise safety, quality and productivity
- communicated effectively and worked safely with others when undertaking troubleshooting and rectification activities
- completed accurate detailed records for system and product faults, diagnostic and corrective action processes on completion of fault rectification activity.

## 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 dry end systems, including emergency procedures, handling chemical and hazardous substances, high risk load shifting, licensing requirements, plant clearance and permit systems
- environmental requirements relevant to dry end systems, including disposal procedures
- relevant workplace and legislative environmental sustainability requirements and practices for dry end operations, including workplace biotechnological applications and processes considerations for troubleshooting and rectification activities
- purpose, standards and procedures used for troubleshooting dry end systems, including routine physical inspections and sampling and testing for quality checks

- manufacturer specifications and operating procedures for dry end plant and equipment, including shutdown and isolation procedures
- dry end plant processes and associated services to troubleshoot, including:
  - plant layout
  - principles of operation
  - causes and effects of adjustments made to dry end systems
  - relationships between dry end systems and associated services
- cause and effect of unplanned shutdown, and appropriate responses
- maintenance system as it applies to dry end plant and processes
- electronic and other control systems, operation and application to make appropriate adjustments that control dry end 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 paper manufacturing facility or an environment that accurately represents workplace conditions
- resources, equipment and materials:
  - tools, equipment and consumables used to troubleshoot and repair systems
  - electronic control systems that include digital control system, touch screens or robotics used in dry end systems
  - personal protective equipment required for inspecting, operating and rectifying faulty dry end systems
  - proforma or recording system for recording diagnostic and corrective action processes
- specifications:
  - workplace and standard operating procedures relating to troubleshooting and rectifying dry end operations, 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.

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