



Australian Government

Department of Education, Employment and Workplace Relations

FPPCPP440A Troubleshoot and rectify coated paper processes

Release: 1

FPPCPP440A Troubleshoot and rectify coated paper processes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to troubleshoot and rectify coated paper processes in the pulp and paper industry

General legislation, regulatory, licensing and certification requirements applicable to this unit are detailed in the range statement

Specific high risk licensing requirements for this unit may be applicable and are to be met separately and prior to the achievement of this unit

Application of the Unit

Application of the unit

This unit applies to operators who troubleshoot and rectify coated paper processes in the pulp and paper industry. This work typically involves complex integrated equipment and continuous operations

This unit generally applies to those who:

- identify and diagnose causes of process variation, plant or equipment faults
- rectify process variation, plant and equipment faults
- identify and rectify product quality faults, and
- record and report troubleshooting activities

to meet safety, quality and productivity requirements

It does not include monitoring and controlling, starting up or shutting down coated paper processes

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and diagnose causes of process variation, plant or equipment faults	1.1. Causes of process variation, plant or equipment faults are identified and diagnosed within Occupational Health and Safety (OHS) regulations, environmental and safe working requirements/practices, Standard Operating Procedures (SOP), and housekeeping requirements 1.2. Visual assessments and machine alarm systems are interpreted to determine fault type and location 1.3. Routine physical inspections of plant and processes are made to identify faults 1.4. Cause and source of process variation, plant or equipment faults is identified and located using appropriate techniques 1.5. Relevant historical data is accessed and analysed to confirm diagnosis as required 1.6. Problems are communicated to relevant personnel
2. Rectify process variation, plant and equipment faults	2.1. Process variation, plant and equipment faults are rectified within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements 2.2. Emergency stop or shutdown, isolation and lockout procedures are initiated prior to fault rectification 2.3. Faulty equipment or instrumentation is isolated and repaired or replaced 2.4. Corrective operational adjustments and maintenance requirements are implemented 2.5. Restoration to normal operation is achieved and communicated to relevant personnel
3. Identify and rectify product quality faults	3.1. Product quality faults are identified and rectified within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements 3.2. Product faults or variations are identified by observation, systematic sampling and testing 3.3. Out-of-specification product is managed 3.4. Sampling for a range of tests is undertaken 3.5. Required tests are conducted 3.6. Test results are interpreted and operations are adjusted to correct variations
4. Record and report	4.1. Troubleshooting activities are recorded and reported

ELEMENT	PERFORMANCE CRITERIA
troubleshooting activities	within OHS regulations, environmental and safe working requirements/practices, SOP, and housekeeping requirements 4.2. Variations from specification and machine operation faults are documented 4.3. Assessment and evaluation of causes of deviation, and corrective action undertaken is recorded as required 4.4. Relevant information is communicated to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the skills and knowledge required for this unit.

Required skills

- Identifies, accesses and interprets relevant historical and operational data and information
- Uses required forms of communication in troubleshooting and rectifying coated paper processes
- Reads and interprets required documentation, procedures and reports
- Prepares written information for a range of audiences
- Makes recommendations for further action
- Accesses, navigates and enters computer-based information
- Monitors, analyses and interprets data
- Interprets instruments, gauges and data recording equipment
- Communicates effectively with personnel to assist with analysis and resolution of operational problems
- Assists others to identify and resolve operational problems in the workplace
- Identifies and actions systems, quality and equipment faults within level of responsibility
- Identifies causes and effects of faults and corrective action on associated processes
- Selects and uses appropriate troubleshooting methods
- Takes timely corrective action to maximise safety, quality and productivity
- Undertakes necessary calculations to aid troubleshooting, as required
- Identifies and monitors process control points
- Maintains situational awareness in the work area
- Responds to emergencies or unplanned shutdowns in accordance with SOP

REQUIRED SKILLS AND KNOWLEDGE

- Implements isolations and lockouts according to SOP
- Identifies and implements operational procedures
- Maintains plant operation and production with minimal interruptions
- Maintains grade specification and quality or initiates appropriate action to rectify
- Identifies and implements test requirements
- Takes samples, conducts tests and interprets and records results if required
- Uses measuring equipment as required
- Operates high risk load shifting equipment as required
- Uses technology to assist work performance
- Analyses and uses sensory information to adjust process to maximise safety, quality and productivity
- Uses electronic and other control systems to control equipment and processes as required

Required knowledge

- Procedures, regulations and legislative requirements relevant to coated paper processes including OHS, environmental including relevant sustainability requirements/practices, SOP, isolation procedures, safe working requirements, risks and hazard identification and housekeeping
- Relevant forms of communication
- Detailed knowledge of coated paper processes and associated services sufficient to troubleshoot including:
 - plant layout
 - theory of operation
 - causes and effects of adjustments made to coated paper plant and processes
 - relationships between coated paper processes and associated services
- An appropriate range of troubleshooting methods
- Impact of inappropriate responses
- Sampling and testing process for plant and system operations, and process monitoring - purpose, standards and procedures as per site agreements
- Cause and effect of test results and actions
- Product grade and process adjustment procedures
- Application of high risk load shifting equipment as required
- Sensory information that indicates a deviation from standard operating parameters
- Sufficient knowledge of electronic and other control systems, operation and application to make appropriate adjustments that control coated paper processes, within level of responsibility

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence should be relevant to the work. It should satisfy the requirements of the elements and performance criteria and include consideration of:

- the required knowledge and skills tailored to the needs of the specific workplace
- applicable OHS regulations, environmental and safe working requirements/practices, SOP and housekeeping requirements
- applicable aspects of the range statement
- practical workplace demonstration of skills in troubleshooting and rectifying coated paper processes

Context of and specific resources for assessment

A workplace assessment must be used to assess:

- the application of required knowledge on the job
- the application of skills on the job, over time and under a range of typical conditions that may be experienced in coated paper processes

Access to the full range of equipment involved in integrated continuous manufacturing of coated paper processes in a pulp or paper mill is required

Method of assessment

A combination of assessment methods should be used. The following examples are appropriate for this unit:

- observation of applied skills and knowledge on the job
- workplace demonstrations via a mock-up or simulation that replicate part/s of the job
- answers to written or verbal questions about specific skills and knowledge
- third-party reports from relevant and skilled personnel
- written evidence e.g. log sheet entries, checklist entries, test results

Assessment processes and techniques must be culturally appropriate and in keeping with the language

EVIDENCE GUIDE

and literacy capacity of the learner and the work being performed. This includes conducting an assessment in a manner that allows thoughts to be conveyed verbally so that the learner can both understand and be understood by the assessor (e.g. use plain English and terminology used on the job)

A holistic assessment with other units relevant to the pulp and paper industry, mill and job role is recommended

Additional information on approaches to assessment for the pulp and paper industry is provided in the Assessment Guidelines for this Training Package

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Productivity requirements may include:

- energy efficiency
- waste minimisation
- evaporation minimisation, including landfill and waste water reduction
- environmentally safe waste disposal
- consideration of resource utilisation, including fibre efficiency
- minimising delays
- chemical recovery maximisation
- meeting key performance indicators
- line speed
- handovers
- quality checks
- meeting output targets i.e. net tonnes per employee per annum
- machine/process time availability i.e. time the machine or process is making product

RANGE STATEMENT

Coated paper processes may include:

- machine/process production rate
- tail feed systems
- chemical and material batching
- laminating and coating
- splicing
- clay plant operation
- calender
- pre-reeler operations
- super calendering
- monitoring systems
- rewinding
- drying systems
- internal unloading
- combine rollers
- testing

Materials and supplies may include:

- chemicals and polymers
- power
- water
- additives
- steam
- labels
- felts
- equipment
- gas
- accessories (parts)
- air
- base paper

Equipment may include:

- coater
- splicer
- pre-reelers
- crimpers
- calender
- super-calender
- parent rolls and reels
- cranes
- pigment
- coating makedown plant
- starch cooker
- slitter
- computer systems

RANGE STATEMENT

- electronic screens and alarms
 - process control systems
 - analogue and digital instrumentation
 - fully automated, semi-automated, manually operated plant and equipment appropriate to the coated paper process
- Electronic control systems may include:
- Digital Control System (DCS)
 - touch screens
 - robotics
- Legislation, regulatory, licensing and certification requirements may include:
- OHS and environmental requirements (local, state and commonwealth)
 - activity or task specific high risk licensing requirements
- Documentation, procedures and reports may include:
- SOP
 - quality procedures
 - environmental sustainability requirements/practices
 - plant manufacturing operating manuals
 - enterprise policies and procedures
 - Material Safety Data Sheets (MSDS)
 - oil or chemical spills and disposal guidelines
 - plant isolation documentation
 - safe work documentation e.g. plant clearance, job safety analysis, permit systems
 - product specifications and schedules
 - maintenance logs
 - job sheets
 - site agreements
 - safety instructions
 - process and instrument diagrams
 - machine manuals
 - troubleshooting guides
 - incidents reports
- Maintenance may include:
- operator level maintenance as per site agreements
 - operator maintenance schedules
 - maintenance systems
 - maintenance suppliers
 - proactive maintenance strategies e.g. Total Productive Maintenance (TPM), Reliability Centred Maintenance (RCM)

RANGE STATEMENT

Actions may include:

- process adjustments
- reporting to authorised person
- rectifying problem within level of responsibility

Communications may include

interaction with:

- internal/external customers and suppliers
- team members
- production/service co-ordinators
- maintenance services
- operator support personnel
- operational management
- statutory authorities

Situational awareness may include awareness of:

- traffic
- pedestrians
- location of equipment
- product
- hazards
- obstruction
- unexpected movement

Forms of communication may include:

- written e.g. log books, emails, incident and other reports, run sheets, data entry
- reading and interpreting documentation e.g. SOP, manuals, checklists, drawings
- verbal e.g. radio skills, telephone, face to face, handover
- non-verbal e.g. hand signals, alarms, observations
- signage e.g. safety, access

Sensory information may include:

- visual
- sound
- feel
- touch
- smell
- vibration
- temperature

Unit Sector(s)

Not Applicable