

Title	Run machine clothing in pulp or paper manufacturing		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the removal and installation of machine clothing; supervise machine clothing de-cloth and installation; operate machine clothing; and monitor and control the performance of machine clothing.
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Classification	Wood Fibre Manufacturing > Pulp and Paper Manufacturing Skills
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Available grade	Achieved
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Guidance Information

1 Legislation and references

Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

- Hazardous Substances and New Organisms Act 1996;
- Health and Safety at Work Act 2015;
- Resource Management Act 1991;
- Health and Safety at Work (Major Hazard Facilities) Regulations 2016.

2 Definitions

Machine clothing refers to wet end felts, dryer felts, and twin or single forming fabrics or wires.

Operating parameters refer to the boundary conditions in which the operations are carried out in the removal and installation of machine clothing.

Operating procedures refer to the process(es) that are worked through, e.g. standard operating procedure (SOP) in the removal and installation of machine clothing.

Worksite documentation refers to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace, and are consistent with manufacturer's requirements. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, sustainability, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the pulp and paper industry.

3 Assessment Information

Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, worksite documentation and legislative requirements.

This includes the knowledge and use of suitable tools and equipment.

4 Recommended skills and knowledge:

Unit 3514, *Assist with changing machine clothing in pulp or paper manufacturing*; or demonstrate equivalent knowledge and skills.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the removal and installation of machine clothing.

Performance criteria

- 1.1 Functions of machine clothing are explained in terms of water absorption, web support, and sheet finish.
- 1.2 Properties of machine clothing are explained.
- Range properties may include but are not limited to – length, width, drainage rate, shrinkage, heat resistance, weave, weight.
- 1.3 Operating components and process controls of machine clothing are described and their purpose and operation are explained.
- Range operating components may include but are not limited to – rolls, showers, uhle boxes, guiding spade, guide rolls, guide control system, limit switches, distributed control systems.
- 1.4 Manufacturer's installation and set-up instructions for run direction, product side, and tension are interpreted and checked.
- 1.5 Hazards associated with the removal and installation of machine clothing are identified, and actions to be taken to minimise, or eliminate the hazards are described.
- Range hazards may include but are not limited to – heat, working at heights, nips, ropes, lifting, moving components.
- 1.6 Consequences of non-conformance with worksite operating procedures when operating machine clothing are described.
- 1.7 Roles and responsibilities of the machine clothing operator are described.

Outcome 2

Supervise machine clothing de-cloth and installation.

Performance criteria

- 2.1 Safe work practices associated with supervising the machine clothing removal and installation are identified and used.
- Range practices may include but are not limited to – isolation procedures, lock outs, emergency stops, machine guarding, wearing appropriate safety equipment.
- 2.2 Machine clothing is inspected to ensure condition and correct clothing is installed.
- 2.3 Removal and installation plan is discussed with operators to ensure safety hazards and risks are minimised, to prevent the installation of defective clothing, and to prevent plant damage.
- Range plan may include but is not limited to – use of hydraulic jacks and cantilever systems.
- 2.4 Supervision of others in the de-cloth and installation of machine clothing is demonstrated.
- 2.5 Machine clothing removal and installation are checked for quality and timeliness to meet requirements.

Outcome 3

Operate machine clothing.

Performance criteria

- 3.1 Safe work practices associated with operating machine clothing are demonstrated.
- Range practices may include but are not limited to – isolation procedures, lock-outs or tag-outs, emergency stops, machine guarding, wearing appropriate safety equipment.
- 3.2 Equipment is set up, started up, operated, and shut down.
- Range equipment may include but is not limited to – tension rolls, stretch rolls, guide rolls, high pressure rolls, double wire pressure rolls.
- 3.3 Tensioning and conditioning of machine clothing are carried out.
- 3.4 Inspection of the guiding system is carried out.

Outcome 4

Monitor and control the performance of machine clothing.

Performance criteria

- 4.1 Guiding systems to enable machine clothing and seam alignment to be maintained are monitored and adjusted.
- 4.2 Machine clothing tension is monitored to enable control action to be taken.
- 4.3 Condition of machine rolls in the clothing run is monitored to enable clothing performance to be maintained.

Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 February 1995	31 December 2024
Revision	2	27 January 1997	31 December 2024
Review	3	25 February 1999	31 December 2024
Review	4	18 December 2006	31 December 2024
Review	5	24 October 2014	31 December 2025
Review	6	30 November 2023	N/A

Consent and Moderation Requirements (CMR) reference	0173
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.