

Title	Form wood pulp web for wood pulp manufacturing using a fourdrinier former		
Level	4	Credits	20

Purpose	People credited with this unit standard are able to, for wood pulp manufacture: demonstrate knowledge of a fourdrinier former; operate a fourdrinier former; and monitor and control the performance of a fourdrinier former.
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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

Operating parameters refer to the boundary conditions in which the operations are carried out in operating a fourdrinier former.

Operating procedures refer to the process(es) that are worked through, e.g. standard operating procedure (SOP) in operating a fourdrinier former.

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 sector.

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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of a fourdrinier former for wood pulp manufacture.

Performance criteria

- 1.1 The function and operation of the fourdrinier former are explained.
- 1.2 The operating parameters and capability of the fourdrinier former are explained.
- Range operating parameters – machine speeds, profile adjustment, drainage, web formation, freeness, consistency.
- 1.3 Operating components and process controls of the fourdrinier former are described and their purpose is explained.
- Range operating components may include but are not limited to – fabric guiding, vacuum, headbox, water deflectors, deckles, cleaning showers, doctors, forming board, tension rolls, distributed control system (DCS).
- 1.4 Hazards associated with fourdrinier formers are identified and actions to be taken to minimise, or eliminate the hazards are described.
- Range hazards may include but are not limited to – chemicals, heat, steam, moving equipment, pressure.
- 1.5 The consequences of non-conformance of web forming with worksite operating procedures are described.
- 1.6 Roles and responsibilities of the web former operator are described.

Outcome 2

Operate a fourdrinier former for wood pulp manufacture.

Performance criteria

- 2.1 Safe work practices associated with operating a fourdrinier former for wood pulp manufacture are demonstrated.
- Range practices may include but are not limited to – isolation procedures, lock-outs or tag-outs, emergency stops, machine guarding, wearing of safety equipment.
- 2.2 Fourdrinier former is set up, started up, operated, and shut down.

2.3 Operating parameters are set and adjusted to enable production requirements to be achieved.

Range operating parameters may include but are not limited to – machine speeds, stock temperature and consistency, headbox level and pressure, circulation flow, freeness;
production requirements may include but are not limited to – sheet formation, production rate, grade changes.

2.4 Essential care and housekeeping requirements for the fourdrinier former are carried out.

Outcome 3

Monitor and control the performance of a fourdrinier former for wood pulp manufacture.

Performance criteria

3.1 Performance of a fourdrinier former is monitored and parameters are controlled in accordance with operating parameters.

3.2 Operating and equipment faults and malfunctions are identified, and relevant corrective actions are taken.

Range operating faults and malfunctions may include but are not limited to – consistency changes, abnormal formation variations, fabric and shower performance;
equipment faults and malfunctions – electrical, mechanical, instrumentation, distributed control system.

3.3 Production rate is regulated in accordance with process requirements.

3.4 Production, maintenance, and quality records are completed.

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	25 February 1999	31 December 2024
Review	2	18 December 2006	31 December 2024
Review	3	24 October 2014	31 December 2025
Review	4	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 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.