

Title	Form paper web from wood pulp furnish		
Level	4	Credits	25

Purpose	People credited with this unit standard are able to: demonstrate knowledge of paper web forming; operate a paper web forming section; and monitor and control the performance of a paper web former.
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Classification	Wood Fibre Manufacturing > Paper Making
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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 refers to the boundary conditions in which the operations are carried out in paper web forming.

Operating procedures refers to the process(es) that are worked through, e.g. standard operating procedure (SOP) in paper web forming.

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 paper making industry.

3 Range

Formers may include – multi wire, fourdrinier; evidence is required for one.

4 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 paper web forming.

Performance criteria

1.1 Purpose of wet sheet formation is explained.

1.2 Operating principles of paper web formers are explained.

Range operating principles may include but are not limited to – fabric speed, jet speed, efflux ratio, headbox angle, slice configuration, profile adjustment, drainage, basis weight, couching, web formation, freeness, consistency, wet line.

1.3 Operating components and process controls of web formers are described and their purpose and operation are explained.

Range operating components may include but are not limited to – wire and fabric guiding, vacuum, headbox, water deflectors, deckles, cleaning showers, doctors, return rolls, forming boards, edge bleeds, distributed control system.

1.4 Operating parameters and capability of a web former are explained.

Range operating parameters and capability may include but are not limited to – slice configuration, stock temperature and consistency, efflux ratio, headbox level and pressure, circulation flow, freeness.

1.5 Hazards associated with web 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 – heat, steam, moving equipment, pressure.

1.6 Consequences of non-compliance of web forming with worksite operating procedures are described.

1.7 Roles and responsibilities of the web former operator are described.

Outcome 2

Operate a paper web forming section.

Performance criteria

- 2.1 Safe work practices associated with operating and maintaining a paper web forming section are demonstrated.
- Range practices may include but are not limited to – isolation procedures, lock-outs or tag-outs, emergency stops, machine guarding, chemical handling, wearing appropriate safety equipment.
- 2.2 Forming section 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 – slice configuration, stock temperature and consistency, efflux ratio, headbox level and pressure, circulation flow, freeness; production requirements may include but are not limited to – change single to double ply, change double to single ply, grammage ratios, thickness, grammage, porosity, paper strength properties, sheet formation.
- 2.4 Essential care and housekeeping requirements for the forming section are carried out.
- Range may include but is not limited to – equipment checks, wash-up schedules, cleaning chemicals.

Outcome 3

Monitor and control the performance of a paper web former.

Performance criteria

- 3.1 Performance of a paper web 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 may include but are not limited to – electrical, mechanical, instrumentation, distributed control system.
- 3.3 Production rate is regulated in accordance with process requirements.
- 3.4 Output paper is monitored to meet quality requirements.

3.5 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.