

Title	Dewater wood pulp using twin wire		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to: demonstrate knowledge of twin wire dewatering; operate a twin wire; and monitor and control the performance of a twin wire.
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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

Twin wire refers to any high pressure, double wire, or heavy-duty twin wire, including couch pit pulper operation.

Operating parameters refer to the boundary conditions in which the operations are carried out in twin wire dewatering.

Operating procedures refer to the process(es) that are worked through, e.g. standard operating procedure (SOP) in twin wire dewatering.

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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of twin wire dewatering.

Performance criteria

- 1.1 Purpose and function of dewatering in the pulp making process are explained.
- 1.2 Operating parameters, capability, and capacity of twin wire dewatering are explained.
- 1.3 Operating components and process controls of a twin wire are described and their purpose and operation are explained.
- Range operating components may include but are not limited to – headbox, skirts, deckles, flow control valve, table rolls, S rolls, incline press, main press, tracking and tensioning systems, doctors, backwater system, loop control if fitted, trim showers, couch pit and agitator if fitted, shredder, gauges, distributed control system.
- 1.4 Hazards associated with operating a twin wire are identified and actions to be taken to minimise, or eliminate the hazards are explained.
- Range hazards may include but are not limited to – electricity, pressure, moving mechanical plant, sharp edges, water.
- 1.5 Consequences of non-conformance with worksite operating procedures are explained.
- 1.6 Roles and responsibilities of the twin wire dewatering operator are explained.

Outcome 2

Operate a twin wire.

Performance criteria

- 2.1 Safe work practices associated with operating a twin wire 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 Twin wire 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 speed, flow rate, required dryness, input consistency, temperature, roll pressures, upstream and downstream production requirements, setting up of edge cutters; production requirements may include but are not limited to – product quality, production rate.

2.4 Essential care and housekeeping requirements are carried out.

Outcome 3

Monitor and control the performance of a twin wire.

Performance criteria

3.1 Performance of a twin wire is monitored and parameters are controlled in accordance with operating parameters.

Range control parameters may include but are not limited to – adjustment of draw control systems, press pressures, speed, torque, headbox opening, wedge pressure.

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

Range equipment faults and malfunctions may include but are not limited to – electrical, mechanical, hydraulic, pneumatic, distributed control system.

3.3 Output pulp for dewatering is monitored to meet specified 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	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

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.