

Title	Dewater furnish at high consistency		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to: demonstrate knowledge of furnish dewatering; operate a high-consistency dewatering press; and monitor and control the performance of a high-consistency dewatering press.
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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

Furnish refers to the fibrous product constituents comprising pulp and paper (including recycled papers, pulps and broke) blended in stock preparation to meet the requirements of various final pulp or paper product grades.

Operating parameters refer to the boundary conditions in which the operations are carried out in operating a high-consistency dewatering press.

Operating procedures refer to the process(es) that are worked through, e.g. standard operating procedure (SOP) in operating a high-consistency dewatering press.

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 furnish dewatering.

Performance criteria

- 1.1 Purpose and function of furnish dewatering are explained.
- 1.2 Operating components and process controls of furnish dewatering presses are described and their purpose and operation are explained.
- Range operating components of a vee press include – feed screws, nip press, hydraulic spring, discharger, steam heating system, basket; operating components of a screw press – screw, incoming and output stock systems; operating components of a twin roll press include – rolls, inlet pressure, torque, doctors, nip; evidence is required for one press.
- 1.3 Operating principles of furnish dewatering presses are explained in terms of torque, extractives, flow, temperature, consistency and dilution, speed, and pressure.
- 1.4 Operating parameters and capability of furnish dewatering presses are explained.
- 1.5 Hazards associated with furnish dewatering are identified and actions to be taken to minimise, or eliminate the hazards are described.
- Range hazards may include but are not limited to – pressure, moving plant components, sharp edges.
- 1.6 Consequences of non-conformance of furnish dewatering with worksite operating procedures are described.
- 1.7 Roles and responsibilities of the furnish dewatering press operator are described.

Outcome 2

Operate a high-consistency dewatering press.

Range furnish dewatering presses may include – screw, vee, twin roll; evidence is required for one.

Performance criteria

2.1 Safe work practices associated with operating a high-consistency dewatering press are identified and used.

Range practices may include but are not limited to – isolation procedures, lock-outs or tag-outs, emergency stops, machine guarding, wearing appropriate safety equipment.

2.2 Dewatering press is set up, started up, operated, and shut down.

2.3 Essential care and housekeeping requirements for the dewatering press are carried out.

Outcome 3

Monitor and control the performance of a high-consistency dewatering press.

Range furnish dewatering presses may include – screw, vee, twin roll; evidence is required for one.

Performance criteria

3.1 Performance of a high-consistency dewatering press 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 equipment faults and malfunctions – electrical, mechanical.

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

Range operating parameters may include but are not limited to – torque, speed, pressure, consistency, temperature; production requirements – product quality, production rate.

3.4 Output furnish for moisture content is monitored to meet specified 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.