

<b>Title</b>	<b>Flash dry wood pulp</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>20</b>

<b>Purpose</b>	People credited with this unit standard are able to: demonstrate knowledge of pulp drying using a flash dryer; operate a flash dryer and associated equipment; and monitor and control the performance of a flash dryer and associated equipment.
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<b>Classification</b>	Wood Fibre Manufacturing > Pulp Making
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<b>Available grade</b>	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 pulp drying using a flash dryer.

*Operating procedures* refer to the process(es) that are worked through, e.g. standard operating procedure (SOP) in pulp drying using a flash dryer.

*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 making 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.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of pulp drying using a flash dryer.

#### Performance criteria

- 1.1 Function of flash dryers in the pulp making process is explained.
- 1.2 Principles of pulp drying that apply to flash dryers are explained.
- Range control of moisture content, heat exchange, ventilation, drying costs.
- 1.3 Fuel sources used in flash dryers are identified.
- Range fuel sources may include but are not limited to – gas, steam, oil.
- 1.4 Operating components and process controls used to flash dry pulp are described and their purpose and operation is explained.
- Range flash dry pulp components may include but are not limited to – fans, fluffers, heat plant, cyclones.
- 1.5 Hazards associated with flash dryers are identified and actions to be taken to minimise, or eliminate the hazards are explained.
- Range hazards may include but are not limited to – confined space entry, fire, heat, pressure, explosions, dust.
- 1.6 Consequences of non-conformance with worksite operating procedures are explained.
- Range consequences may include but are not limited to – internal and external customer requirements, environmental issues, internal and external suppliers' expectations.
- 1.7 Roles and responsibilities of the flash dryer operator are explained.

### Outcome 2

Operate a flash dryer and associated equipment.

Range associated equipment may include but is not limited to – fans, fluffers, heat plant, cyclones.

**Performance criteria**

- 2.1 Safe work practices associated with operating the flash dryer and associated equipment are demonstrated.  
 Range practices may include but are not limited to – isolation procedures, lockouts or tag-outs, emergency stops, machine guarding, wearing appropriate safety equipment.
- 2.2 Flash dryer and associated equipment are 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 – temperature, air flow, energy usage, fluffer gap, input and output pulp moisture content.
- 2.4 Essential care and housekeeping requirements are carried out.

**Outcome 3**

Monitor and control the performance of a flash dryer and associated equipment.

**Performance criteria**

- 3.1 Performance of a flash dryer and associated equipment is monitored and parameters are controlled in accordance with operating parameters.  
 Range control parameters – temperature, air flow, energy usage, input and output pulp moisture content, fibre surface area.
- 3.2 Operating and equipment faults and malfunctions are identified, and relevant corrective actions are taken.  
 Range equipment faults and malfunctions – mechanical, electrical, instrumentation, distributed control system.
- 3.3 Moisture content of output pulp is monitored to meet specified requirement.
- 3.4 Production rate is regulated in accordance with requirements.
- 3.5 Production, maintenance, and quality records are completed.

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<b>Planned review date</b>	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](mailto:qualifications@hangaarorau.nz) if you wish to suggest changes to the content of this unit standard.