

<b>Title</b>	<b>Dry paper web using infra-red dryers</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to: explain fundamentals of infra-red dryers; operate and maintain an infra-red dryer efficiently; and monitor and control the efficient performance of an infra-red dryer.
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<b>Classification</b>	Wood Fibre Manufacturing > Paper Making
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Definition  
*Worksite documentation* refers to instructions to staff on policy and procedures (including the application of legislation to worksite situations) which are formally documented, and are available for reference at the worksite. Examples are standard operating procedures, specifications, manuals, and manufacturer's information.
- 2 The following apply to the performance of all outcomes of this unit standard:
  - a All work practices must meet recognised codes of practice and documented worksite health and safety and environmental procedures (where these exceed code) for personal, product, and worksite health and safety, and must meet the obligations required under current legislation, including the Health and Safety in Employment Act 1992, the Resource Management Act 1991, and their subsequent amendments.
  - b All work practices must meet documented worksite operating procedures. This includes the recording (by electronic or non-electronic means) of activities, events, and decisions.
  - c All communications made in relation to this unit standard must be made in accordance with worksite procedures for content, recipient, timing, and method.

### Outcomes and performance criteria

#### Outcome 1

Explain fundamentals of infra-red dryers.

#### Performance criteria

- 1.1 The function of infra-red dryers in the pulp and paper making process is explained in accordance with worksite documentation.

- 1.2 Operating parameters and capability of infra-red dryers are explained in accordance with worksite documentation.
- Range temperatures, throughput, roll speed tension controls, fans.
- 1.3 Operating components and process controls of the infra-red dryer are identified, and their purpose is explained, in accordance with worksite documentation.
- 1.4 Hazards associated with infra-red dryers are identified and actions to be taken to isolate, minimise, or eliminate the hazard are described in accordance with worksite documentation.
- Range hazards may include but are not limited to – heat, moving equipment components, infra-red radiation, fire.
- 1.5 Consequences of non-conformance with worksite operating procedures are described in accordance with worksite documentation.
- 1.6 Roles and responsibilities of the infra-red dryer operator are described in accordance with worksite documentation.

## **Outcome 2**

Operate and maintain an infra-red dryer efficiently.

### **Performance criteria**

- 2.1 Safe work practices associated with operating an infra-red dryer are identified and used in accordance with worksite documentation and legislative requirements.
- Range practices may include but are not limited to – isolation procedures, lock-outs, emergency stops, machine guarding, wearing appropriate safety equipment.
- 2.2 Dryer is set up, started up, operated, and shut down efficiently in accordance with worksite documentation.
- 2.3 Setting and timely adjustment of operating parameters enables production requirements to be met in accordance with worksite documentation.
- Range operating parameters – temperature, roll speed tension controls; production requirements – moisture content, moisture profile, production rate.
- 2.4 Fire fighting procedures are followed in accordance with worksite documentation.
- 2.5 Preventative maintenance and cleaning requirements are carried out in accordance with worksite documentation.

**Outcome 3**

Monitor and control the efficient performance of an infra-red dryer.

**Performance criteria**

3.1 Monitoring and interpretation of feedback information and the timely adjustment of control parameters enable product quality, efficient plant performance, and process and legislative requirements to be maintained in accordance with worksite documentation.

Range control parameters – temperature, clearance between dryer and web.

3.2 Operating and equipment faults and malfunctions are identified, and corrective action is taken, in accordance with worksite documentation.

Range operating faults and malfunctions may include but are not limited to – temperature fluctuations, abnormal moisture content variations.

3.3 Output product meets the requirements of worksite documentation for moisture content and moisture profile.

3.4 Production, maintenance, and quality records are explained and completed in accordance with worksite documentation.

**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	22 February 1995	31 December 2025
Revision	2	27 January 1997	31 December 2025
Review	3	25 February 1999	31 December 2025
Review	4	18 December 2006	31 December 2025
Review	5	24 October 2014	31 December 2025
Review	6	30 November 2023	31 December 2025

**Consent and Moderation Requirements (CMR) reference**

0173

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.