

<b>Title</b>	<b>Filter lime mud for burnt lime manufacture in a pulp and paper plant</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 drum filters; operate and maintain a drum filter efficiently; and monitor and control the efficient performance of a drum filter.
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<b>Classification</b>	Wood Fibre Manufacturing > Pulp and Paper - Chemical Plants
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<b>Available grade</b>	Achieved
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### Explanatory notes

- 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 quality management requirements. 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.
- 3 The reference text for this unit standard is Green R.P. & Hough, G (eds.), *Chemical Recovery in the Alkaline Pulping Processes* (TAPPI Press, Revised edition, 1992). It is available through <http://www.tappi.org/>.

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### Outcomes and evidence requirements

#### Outcome 1

Explain fundamentals of drum filters.

**Evidence requirements**

- 1.1 The operation of drum filters is explained in accordance with the reference text.
- 1.2 Operating components of drum filters are identified, and their purpose is explained, in accordance with the reference text.
- Range components may include but are not limited to – continuous pre-coat renewal system, vat, vacuum breaker, showers, dump valve, drums, fabrics, bands, doctor blade, shredder, dilution system, pumps, tanks.
- 1.3 Hazards associated with drum filters 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 – caustic burns, mud spillages, moving plant.
- 1.4 The consequences of non-conformance with worksite operating procedures are described in accordance with worksite documentation.
- 1.5 Roles and responsibilities of the lime mud filter operator are described in accordance with worksite documentation.

**Outcome 2**

Operate and maintain a drum filter efficiently.

**Evidence requirements**

- 2.1 Safe work practices associated with operating a lime mud filter 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 Drum filter 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 achieved in accordance with worksite documentation.
- Range operating parameters – drum filter speed, wash water flow, vat level, mud density, mud drying agent; production requirements – mud dryness, soda content.
- 2.4 Preventative maintenance and cleaning schedules for the lime kiln are carried out in accordance with worksite documentation.

**Outcome 3**

Monitor and control the efficient performance of a drum filter.

**Evidence requirements**

3.1 Monitoring and interpretation of feedback information and 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 – drum filter speed, wash water flow, mud density;  
process requirements – mud consistency, soda content, production rate.

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

Range equipment faults and malfunctions – electrical, mechanical, hydraulic, instrumentation, distributed control system.

3.3 Output product meets the requirements of worksite documentation for mud dryness and soda content.

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

<b>Planned review date</b>	31 December 2019
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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	N/A
Revision	2	27 January 1997	N/A
Review	3	25 February 1999	N/A
Review	4	18 December 2006	N/A
Review	5	24 October 2014	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0173
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Please note**

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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### **Comments on this unit standard**

Please contact Competenz [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.