

Title	Manage technical aspects of thermal energy raising operations for wood panel manufacturing		
Level	5	Credits	10

Purpose	<p>People credited with this unit standard are able to: explain principles of combustion that relate to heat raising for the wood panel manufacturing industry; establish operating parameters for thermal energy plants; and resolve heat raising problems.</p> <p>This unit standard is for people who are, or intend to be employed in the wood panel manufacturing industry, and is aimed at people, such as production managers and some operators, who have responsibility for production supervision of the raising of thermal energy.</p>
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Classification	Wood Manufacturing - Generic Skills > Wood Panel Manufacturing Skills
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Available grade	Achieved
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Guidance Information

- 1 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 must be made in accordance with worksite procedures for content, recipient, timing and method.
- 2 Definitions

Thermal energy plant refers to plant that may raise steam, heat oil, or heat air for further wood panel processing.

Worksite policies and procedures refer to documented policies and to documented or other directions provided to staff. These include, but are not limited to, ways of managing health and safety, environmental considerations, quality, and production, and must conform to legislation. Examples include standard operating procedures, company health and safety plans, on-site briefings, and supervisor's instructions.

- 3 Recommended skills and knowledge:
Unit 703, *Operate, monitor and control performance of a thermal energy plant for wood panel manufacturing*, or demonstrate equivalent knowledge and skills.
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Outcomes and performance criteria

Outcome 1

Explain principles of combustion that relate to heat raising for the wood panel manufacturing industry.

Performance criteria

- 1.1 The chemical composition, calorific values, and relative costs of fuels used in wood panel manufacturing are identified in accordance with worksite policies and procedures.
- Range may include but is not limited to – wood, wood dust, gas, coal, oil.
- 1.2 The effect of moisture content on the calorific content of wood is explained in accordance with worksite policies and procedures.
- 1.3 The quantity of air required for the efficient combustion of a range of fuels is calculated in accordance with worksite policies and procedures.
- Range may include but is not limited to – wood, gas, coal, oil.
- 1.4 The operating principles of heat transfer systems and media are explained and the advantages and disadvantages of the systems and media are described.
- Range heat transfer systems may include but are not limited to – hot oil, steam, hot gas.

Outcome 2

Establish operating parameters for thermal energy plants.

Range may include but are not limited to – fuel type, fuel flow, combustion air supply.

Performance criteria

- 2.1 Total thermal energy output required by the production process is established and expressed in accordance with worksite policies and procedures.
- 2.2 Parameters are balanced in accordance with the requirements of worksite policies and procedures for production of the required heat quantity, minimisation of cost, and prevention of damage to equipment and product.

Outcome 3

Resolve heat raising problems.

Range fuel type, fuel flow, combustion air supply, mechanical malfunction.

Performance criteria

- 3.1 Problem causes and potential solutions are identified in accordance with worksite policies and procedures.
- 3.2 Corrective action is taken in accordance with the requirements of worksite policies and procedures for cost-effectiveness, maintenance of product specifications, and conformance with worksite environmental, safety, and quality management requirements.

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	25 January 1995	31 December 2012
Review	2	24 November 1995	31 December 2012
Revision	3	12 February 1998	31 December 2012
Review	4	25 March 1999	31 December 2012
Review	5	29 March 2005	31 December 2012
Rollover and Revision	6	23 February 2007	31 December 2013
Review	7	19 April 2012	31 December 2020
Review	8	23 April 2020	31 December 2020
Rollover	9	10 December 2020	31 December 2022

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.