

Title	Demonstrate knowledge of, operate, and monitor a boiler and auxiliary plant on a commercial fishing vessel		
Level	3	Credits	6

Purpose	<p>This unit standard is for people working in a commercial seafood operation.</p> <p>People credited with this unit standard are able to demonstrate knowledge of, operate, and monitor a commercial fishing vessel boiler and auxiliary plant.</p>
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Classification	Seafood > Seafood Vessel Operations
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Available grade	Achieved
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Guidance Information

- 1 All evidence presented in this unit standard must be in accordance with:
 - Workplace procedures;
 - *Code of Practice for the Design, Safe Operation, Maintenance and Servicing of Boilers*; available through Worksafe at <https://worksafe.govt.nz/topic-and-industry/machinery/working-safely-with-boilers/>;
 - Hazardous Substances and New Organisms Act 1996;
 - Health and Safety at Work Act 2015;
 - Maritime Transport Act 1994; and any subsequent amendments.

- 2 Definitions

Commercial fishing vessel refers to a vessel that is operating a Maritime Operator Safety System (MOSS) that is recognised by Maritime New Zealand and meets the requirements of the Maritime Transport Operator Certificate and/or Plan.

Workplace procedures refer to the policies and procedures set out in a verbal or written form by the employer or organisation. Procedures must be consistent with current legislative requirements and manufacturer's recommendations or instructions where relevant.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of a commercial fishing vessel boiler and auxiliary plant.

Performance criteria

- 1.1 Describe the requirements for 1.2 megawatt to 6 megawatt boilers.
- Range controls and mountings, trip systems, alarms, supervision, monitoring.
- 1.2 Describe the steps required, and their purpose, for boiler pre-start up and start up.
- 1.3 Describe the purpose and settings for inputs to the boiler alarms and trips to ensure safe boiler operation.
- 1.4 Describe the operating principles and purpose of equipment installed on the boiler.
- Range instrumentation, gauge glasses, safety devices, fuel system, burners, fans, valves, dosing system, feed water system, safety valves, blowdown system.
- 1.5 Locate the emergency shut down devices and describe the procedure for making the boiler system safe in the event of an emergency.
- Range emergencies include but are not limited to – fire, hazardous spill, steam leaks, water loss.
- 1.6 Describe the boiler and auxiliary equipment operating status after reviewing the data presented on the visual display panel.
- 1.7 Describe the purpose of the site specific chemicals used in the boiler feed water system and the safety precautions required for their use.

Outcome 2

Operate a vessel boiler and auxiliary plant.

Performance criteria

- 2.1 Carry out pre-start up checks and take action if required.
- 2.2 Start up and shut down the boiler.
- 2.3 Carry out procedures to ensure the boiler is brought on line.
- 2.4 Carry out routine procedures associated with the operation of the boiler.
- Range plant logs, plant monitoring, maintaining performance specifications, planned preventative maintenance and cleaning, boiler water testing.
- 2.5 Carry out boiler gauge glass blowdown procedure.

2.6 Describe boiler gauge glass problems and solutions to these problems.

Range scale, corrosion, foaming, carry over.

2.7 Carry out post shut down checks.

2.8 Carry out or simulate boiler isolation for maintenance.

2.9 Dose the feed water with the required chemicals.

Outcome 3

Monitor a vessel boiler and auxiliary plant.

Performance criteria

3.1 Monitor boiler and auxiliary equipment, and log and interpret information.

3.2 Identify deviations from normal operating conditions, describe the potential causes of the deviations and take steps to rectify.

3.3 Take boiler water samples, analyse and log the results, identify deviations from required operating parameters, and take steps to correct.

3.4 Describe the consequences of incorrect water treatment in terms of the effect on equipment and heat transfer efficiency.

Range scale, corrosion, foaming, carry over.

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	20 November 2006	31 December 2019
Review	2	11 December 2009	31 December 2019
Review	3	24 January 2019	N/A
Rollover	4	29 February 2024	N/A

Consent and Moderation Requirements (CMR) reference	0123
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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 the Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.