

Title	Demonstrate knowledge of fire prevention and limitation, and extinguish small fires on board a vessel		
Level	3	Credits	5

Purpose	<p>This unit is intended for people who require basic marine firefighting skills to work on vessels not covered by the requirements of STCW 2010.</p> <p>People credited with this unit standard are able to: explain the principles of the fire triangle and describe the common causes, dangers, and preventative measures of fire on board a vessel; extinguish small fires on a vessel; describe actions required to manage the outbreak and spread of fire on board a vessel; and describe the use, maintenance, and location of firefighting equipment for a coastal or inshore limits vessel.</p>
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Classification	Maritime > Sea Survival and Sea Safety
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes:
Health and Safety at Work Act 2015.
Maritime Transport Act 1994 and subsequent amendments.
- 2 References
Maritime Rules and Advisory Circulars. Available at www.maritimenz.govt.nz.
International Maritime Organization, *International Convention on Standards of Training, Certification and Watchkeeping (STCW) for Seafarers*. Available at www.imo.org.
- 3 Definitions
Emergency procedures refers to the emergency procedures documented in the vessel's MTOP.
MTOP stands for Maritime Transport Operator Plan which refers to the documented operational plan required for all commercial vessels as a part of the Maritime Operator Safety System (MOSS), the operator certification system established under Part 19 of the maritime rules and administered by Maritime New Zealand.
Vessel refers to any form of commercial or military watercraft; sometimes used in maritime circles interchangeably with the word *ship*.
- 4 This unit standard covers fire classes A, B, C, D, E, and F, identified in relation to flammable materials found in the learner's living and working environment. This unit standard also covers the fire-fighting techniques for the above fire classes. The

demonstration of fire suppression using extinguishers should be performed off the vessel in a suitable, safe location.

- 5 This unit standard in conjunction with Unit 29220, *Fight fires to STCW–Basic requirements in enclosed spaces on a vessel* covers all of the firefighting training requirements as detailed in the STCW Code, including 2010 Manila Amendments: Part A, Chapter VI – Standards regarding emergency, occupational safety, security, medical care and survival functions, Table A-VI/1-2 Specification of minimum standard of competence in firefighting prevention and firefighting.
- 6 Assessment information
- a Competency may be demonstrated using simulated scenarios.
 - b All activities and evidence must be in accordance with vessel emergency procedures.

Outcomes and performance criteria

Outcome 1

Explain the principles of the fire triangle and describe the common causes, dangers, and preventative measures of fire on board a vessel.

Performance criteria

- 1.1 The principles of the fire triangle are explained in relation to initiation and spread of a fire.
- 1.2 Methods of extinguishing a fire are explained in terms of the removal of factors in the fire triangle.
- Range cooling, removing fuel, smothering.
- 1.3 Sites where a fire can occur onboard a vessel and the possible causes are described.
- Range three sites, three causes of fire.
- 1.4 Measures that can be taken to prevent fires on board a vessel are described.
- Range four measures.
- 1.5 Potential fire related dangers to health from fire on board a vessel are described.
- Range burns, smoke inhalation, toxic fumes, entrapment, loss of vessel.

Outcome 2

Extinguish small fires on a vessel.

Performance criteria

- 2.1 Classes of fire and the extinguishing agents used for each are described.
- Range classes – A, B, C, D, E, F;
extinguishing agents – gas smothering agents, foam, water, dry powder, fire blanket, sand.
- 2.2 Portable extinguisher type is selected in accordance with identified fire class.
- Range three classes of – A, B, C, D, E, F;
extinguisher type must include dry powder, carbon dioxide (CO₂) and aqueous film forming foam (AFFF).
- 2.3 Extinguishers are operated in accordance with equipment operating instructions.
- Range three classes of – A, B, C, D, E, F;
extinguisher type must include dry powder, CO₂ and AFFF.

Outcome 3

Describe actions required to manage the outbreak and spread of fire on board a vessel.

Performance criteria

- 3.1 The location and function of the vessel's fire and emergency stations, signals and equipment are described.
- 3.2 The process of activation of the vessel's fire and emergency signals and the nature of the emergency that requires their activation is described.
- 3.3 The actions required of crew when the fire emergency signal is activated are described.
- 3.4 The actions required if confronted with a fire are described in accordance with the vessel's emergency fire-fighting procedures, self-preservation, and the safety of the vessel's personnel.

Outcome 4

Describe the use, maintenance, and location of firefighting equipment for a coastal or inshore limits vessel.

Performance criteria

- 4.1 The use, maintenance, and location of the firefighting equipment for a coastal or inshore limits vessel are described.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 September 1997	31 December 2015
Review	2	27 July 2001	31 December 2015
Review	3	26 May 2003	31 December 2015
Review	4	18 June 2010	31 December 2016
Review	5	15 October 2015	31 December 2022
Review	6	24 September 2020	N/A

Consent and Moderation Requirements (CMR) reference	0054
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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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.