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| <b>Title</b> | <b>Operate a ship's gantry crane in a port environment</b> |                |          |
| <b>Level</b> | <b>3</b>   | <b>Credits</b> | <b>6</b> |

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| <b>Purpose</b> | People credited with this unit standard are able to: describe factors affecting the operation of a ship's gantry crane; prepare for cargo operations with a ship's gantry crane; control and move loads with a ship's gantry crane; and park and shut down a ship's gantry crane in a port environment. |
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| <b>Classification</b> | Stevedoring and Ports Industry > Port Machinery Operations |
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| <b>Available grade</b> | Achieved |
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| <b>Prerequisites</b> | Unit 20054, <i>Carry out hatchperson duties for cargo operations</i> , or demonstrate equivalent knowledge and skills. |
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### Guidance Information

- Legislative and regulatory requirements relevant to this unit standard include – Health and Safety at Work Act 2015;  
*Approved Code of Practice for Health and Safety in Port Operations*, available at [Health and safety in port operations | WorkSafe](#);  
*New Zealand Port and Harbour Marine Safety Code*, available at [New Zealand Port and Harbour Marine Safety Code - Maritime NZ](#);  
*Approved Code of Practice for Load Lifting and Rigging*, available at <http://www.worksafe.govt.nz>.
- Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with company requirements, legislative requirements and regulatory requirements.
- Definitions  
*Company requirements* refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions and legislative requirements.  
*Heavy loads* are those which may cause the vessel to roll sufficiently to cause a swing.  
*Light loads* are those which do not cause the vessel to roll sufficiently to cause a swing.

*Regulatory requirements* refer to regulations set by but not limited to the New Zealand Customs Service, Ministry for Primary Industries and WorkSafe New Zealand.

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## Outcomes and performance criteria

### Outcome 1

Describe factors affecting the operation of a ship's gantry crane in a port environment.

#### Performance criteria

- 1.1 Ship's gantry crane components and their functions are described.
  - Range lifting equipment, block, winches, lifting wires, controls, deck travel emergency stop button.
- 1.2 Hazards for crane operations and indicators that conditions for lifting operations are becoming hazardous once operations are underway are described.
  - Range evidence of five hazards are required.
- 1.3 Indicators of a safe and stable load on a ship's gantry crane are described.
  - Range evidence of four indicators are required.
- 1.4 Box driving, minimum height of lift, and effect of shock loading on crane and lifting equipment are described.
- 1.5 Requirements of a final check to ensure the crane is safe to leave are described.

### Outcome 2

Prepare for cargo operations with a ship's gantry crane in a port environment.

#### Performance criteria

- 2.1 From briefing information provided, requirements of the operation are identified.
  - Range cargo to be lifted, type of lifting equipment to be used, movements, person in charge.
- 2.2 A pre-operational check is completed, and necessary corrective actions taken.
  - Range communication method/s, visual check of crane and lifting equipment, crane's safe working load, hazards in operating area, crane lighting, crane obstructions, weather conditions.

## 2.3 Start up procedures are completed.

Range identification of crane's controls, confirmation of operating instructions, check on operation of warning lights and operation of emergency stop, activation of mechanisms, test manoeuvres, check on operation of any attached cargo handling equipment, check on limit cut-out operations, report on gear characteristics, report on problems.

### Outcome 3

Control and move loads with a ship's gantry crane in a port environment.

#### Performance criteria

3.1 Light loads are moved to and from wharf and vessel smoothly and without sway, using straight lift.

Range trial lift, cargo movements, coordination with cargo handlers and signalman.

3.2 Heavy loads are moved to and from wharf and vessel smoothly and without sway.

Range trial lift, cargo movements, coordination with cargo handlers and signalman, may include onto twistlocks.

3.3 Ability to kill a swing is demonstrated.

3.4 Load is moved following signalman's directions only, with no line of sight to pick up and put down positions.

3.5 With travel of at least two metres, a load is rotated to fit into available space to ship's requirements.

Range load – a standard lift as it applies to the vessel.

3.6 Coordination and communication with personnel is maintained throughout operations.

3.7 Load movements are carried out in a safe and efficient manner, without risk of damage to crane, lifting equipment, loads, cargo, and wharf, and without harm to people.

### Outcome 4

Park and shut down a ship's gantry crane in a port environment.

#### Performance criteria

4.1 Gantry crane is temporarily parked and shut down.

4.2 Gantry crane is parked and completely shut down.

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| <b>Planned review date</b> | 31 December 2024 |
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**Status information and last date for assessment for superseded versions**

| Process               | Version | Date              | Last Date for Assessment |
|-----------------------|---------|-------------------|--------------------------|
| Registration          | 1       | 26 July 2003      | 31 December 2023         |
| Rollover and Revision | 2       | 17 September 2015 | 31 December 2023         |
| Review                | 3       | 24 February 2022  | N/A                      |

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| <b>Consent and Moderation Requirements (CMR) reference</b> | 0014 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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**Comments on this unit standard**

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council [qualifications@hangaarorau.nz](mailto:qualifications@hangaarorau.nz) if you wish to suggest changes to the content of this unit standard.