

**40830****Sling varied regular loads and direct a crane during lifting operations**

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| <b>Kaupae   Level</b>                              | 3  |
| <b>Whiwhinga   Credit</b>                          | 15   |
| <b>Whāinga   Purpose</b>                           | <p>This skill standard is for people intending to complete a qualification and/or credentials in crane operation.</p> <p>People with this skill standard have the skills to sling varied regular loads and direct a crane during lifting operations.</p> <p>This skill standard may contribute to New Zealand qualifications designed for crane operation.</p> |
| <b>Whakaakoranga me mātua oti   Pre-requisites</b> | Skill standard 40829 <i>Carry out slinging and communicate effectively in a lifting operations context</i> , or equivalent skills and knowledge.   |

**Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria**

| <b>Hua o te ako   Learning outcomes</b>                                     | <b>Paearu aromatawai   Assessment criteria</b>   |
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| 1. Sling varied regular loads and direct a crane during lifting operations. | a. Appropriate tools are used to read environmental conditions in preparation for lifting operations.                                  |
|   | b. The lift plan is reviewed, and roles and activities for different parties are identified for each lifting operation.                |
|   | c. Weights and centres of gravity for varied regular loads are calculated, and a rigging plan is created for the lifting operation.    |
|   | d. Loads are rigged, lifted, and landed, including the use of packing and dunnage where appropriate.                                   |
|   | e. Hazards from swinging and spinning loads are identified and controls are put in place, including demonstration of knots or hitches. |
|   | f. Crane is directed using appropriate communication methods during lifting operations.  |
|   | g. Lifting equipment is removed from the loads without injury to people, or damage to the load or equipment.                           |

**Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria****Assessment specifications:**

A crane capable of slewing and luffing is required for assessment. Pendant-controlled and cab-controlled overhead cranes are not appropriate.

The level of complexity required for assessment includes the learner being provided with:

- a lift plan that includes the load, lifting order and lay down procedure, movement of the crane, choice of lifting equipment, communication methods and roles of those involved in the lift.
- a rigging plan that is for the crane environment only, and must include weight calculations for varied regular loads, centre of gravity, appropriate lifting equipment and configuration.

Tools for identifying environmental conditions may include the Beaufort scale, anemometers, and weather reports.

Ropes for use in tying knots for assessment may be natural or synthetic, and knots demonstrated must include at least three of – bowline, clove hitch, sheet bend, figure 8.

Evidence for directing and controlling loads must meet the following requirements:

- Minimum of 40 lifts (slinging and directing placement of the load) signed off and documented by a workplace verifier.
- Minimum of one lift where the crane operator can't see the load and is directed by radio communication to ensure safety, and one lift where the operator can see the load and is directed by appropriate hand signals.
- Minimum of six variations of lifting operations that may include site, crane, loads, and communication methods.
- Minimum of two assessor-observed lifts.
- Brief description for each type of load, which may be in the form of the Crane Association Operator Logbook.
- Taglines are correctly attached and used to control and move loads. Push sticks may be used as an alternative where appropriate.

**Definitions:**

A *lift plan* refers to the planning of a lift that may be in a variety of formats.

*Regular loads* have the characteristics of uniform weight distribution, concentric loading or regular proportions, known lifting points, and have been repetitively lifted.

**Ngā momo whiwhinga | Grades available**

Achieved.

**Ihirangi waitohu | Indicative content**

- Tools for reading environmental conditions.
- Hazards related to slinging of regular loads.
- Lift and Rigging Plan requirements.
- Lifting equipment types, purposes, and uses.
- Hazards from load movement.
- Lifting gear Work Load Limit (WLL) tables and how they should be used.

- Differences between WLL, Safe Working Load (SWL), and Minimum Breaking Load (MBL), and why they are each important.
- Safety factors for lifting gear.

### Rauemi | Resources

- *Approved Code of Practice for Cranes*, available from <http://www.worksafe.govt.nz>.
- *Crane Programme Guidance*, available from [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz).
- *Crane Safety Manual: For Crane Operators & Dogmen* (Crane Association of New Zealand), and Crane Association Operator Logbook, available from <http://www.cranes.org.nz>.
- Tools for measuring wind speed, weather reports.

### Pārongo Whakaū Kounga | Quality assurance information

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| <b>Ngā rōpū whakatau-paerewa  </b><br>Standard Setting Body                                | Waihanga Ara Rau Construction and Infrastructure Workforce Development Council |
| <b>Whakaritenga Rārangi Paetae Aromatawai  </b><br>DASS classification                     | Service Sector > Cranes > Crane Operation                                      |
| <b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga  </b><br>CMR | 0120   |

| <b>Hātepe  </b> Process                                 | <b>Putanga  </b><br>Version   | <b>Rā whakaputa  </b><br>Review Date | <b>Rā whakamutunga mō te aromatawai  </b><br>Last date for assessment |
|---|---|--------------------------------------|---|
| <b>Rēhitatanga  </b> Registration                       | 1   | 27 November 2025                     | N/A   |
| <b>Kōrero whakakapinga  </b><br>Replacement information | This skill standard and skill standard 40829 replaced unit standard 3789. |                                      |   |
| <b>Rā arotake  </b><br>Planned review date              | 31 December 2030  |                                      |   |

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz) to suggest changes to the content of this skill standard.