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| Crane 2 | Apply knowledge of slinging and communication to a lifting operations context |  |

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| **Kaupae** | Level | 3 |
| **Whiwhinga** | Credit | 10 |
| **Whāinga** | Purpose | This skill standard recognises the knowledge and skills to apply risk management, rigging planning, and load requirements to sling regular loads and communicate during lifting operations.  This skill standard aligns with the New Zealand Certificate in Cranes (Level 3) and may contribute to other programmes of study as appropriate. |
| **Whakaakoranga me mātua oti** |  Pre-requisites | Skill standard Crane 1 *Recognise health and safety requirements for lifting operations* is a co-requisite for this standard. |

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

| **Hua o te ako |** Learning outcomes | **Paearu aromatawai** | Assessment criteria |
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| 1. Recognise lifting requirements for regular and irregular loads. | 1. Rigging plan requirements are explained as appropriate to loads, referring to other workers and people around operations. |
| 1. Regular and irregular loads are differentiated using examples that show their characteristics. |
| 1. The importance of load equalisation on slings is explained using examples. |
| 1. The concept of centre of gravity and its effect on rigging and load stability is recognised. |
| 1. Appropriate measures and methods to control regular and irregular loads are identified. |
| 1. Different environmental conditions that can influence the load and equipment are recognised. |

| 1. Prepare and sling regular loads safely. | 1. Lifting gear is inspected to ensure it is appropriate for use. |
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| 1. Regular loads for lifting are slung appropriate to the load. |
| 1. Demonstrate lifting industry communication methods. | 1. Internationally recognised communication methods for lifting operations are demonstrated. |

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

Assessment specifications:

Communication methods demonstrated must include a minimum of six internationally recognised hand signals, and may include appropriate closed radio channels, backing, audible, recognised stop signal for use with a crane operator.

A minimum of three items of lifting gear must be inspected, which may include shackles, eye bolts, wire rope, slings, chains, synthetic slings.

Directing and controlling of loads must be for loads of different material with different rigging types that have an altered WLL due to sling angle or configuration. This may include parallel basket, choke, basket included angle, double wrap, any other lifting equipment.

*Irregular loads* include one of more of the following characteristics: unequal weight distribution, eccentric loading, irregular shape and proportions, with or without set lifting points.

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

**Ngā momo whiwhinga** | Grades available

Achieved.

**Ihirangi waitohu** | Indicative content

* Hazards related to slinging of regular loads.
* Lift plan requirements.
* Lifting equipment types, purposes, and uses.
* Hazards from load movement.
* Lifting gear WLL tables and how they should be used.
* Differences between WLL, SWL and MBL, and safety factors for lifting gear.
* The process of packing and dunnage of loads.

**Rauemi |** Resources

Crane Programme Guidance, available from [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz).

Approved Code of Practice for Cranes, available from [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

Crane Safety Manual: For Crane Operators & Dogmen (Crane Association of New Zealand), available from [www.cranes.org.nz](http://www.cranes.org.nz).

**Pārongo Whakaū Kounga |** Quality assurance information

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| **Ngā rōpū whakatau-paerewa |** Standard Setting Body | Waihanga Ara Rau Construction and Infrastructure Workforce Development Council |
| **Whakaritenga Rārangi Paetae Aromatawai |** DASS classification | Service Sector > Cranes > Crane Operation |
| **Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga |** CMR | 0025 |

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| **Hātepe |** Process | **Putanga |** Version | **Rā whakaputa |** ReviewDate | **Rā whakamutunga mō te aromatawai |** Last date for assessment |
| **Rēhitatanga |** Registration | 1 | dd mm 2024 | N/A |
| **Kōrero whakakapinga |** Replacement information | N/A | | |
| **Rā arotake |** Planned review date | 31 December 2029 | | |

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.