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| Crane 15 | Configure and operate a tower crane to lift and place regular and irregular loads |  |

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| **Kaupae** | Level | 4 |
| **Whiwhinga** | Credit | 15 |
| **Whāinga** | Purpose | This skill standard recognises the skills to:   * position the tower crane * lift and place regular and irregular loads * put the crane into out-of-service condition * complete daily and weekly operator maintenance of the tower crane.   This skill standard aligns with the New Zealand Certificate in Cranes (Level 4) and may contribute to other programmes of study as appropriate. |
| **Whakaakoranga me mātua oti** |  Pre-requisites | Crane 3 and Crane 9 are pre requisites.  Crane 16 as a co-requisite |

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

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| **Hua o te ako |** Learning outcomes | **Paearu aromatawai** | Assessment criteria |
| 1. Position the tower crane, and lift and place regular and irregular loads. | 1. Crane is inspected, prestart checks undertaken in line with manufacturers requirements and the crane controller is informed of any issues that impact operation of the crane. |
| 1. Lift plan for the task using the tower crane is completed according to manufacturer’s requirements. |
| 1. Workplace is analysed to identify hazards and risks related to the planned lift, and control measures are implemented. |
| 1. Crane is put into in-service condition and positioned according to lift plan requirements. |
| 1. Tasks, hazards, roles and responsibilities are communicated to workers assisting with the lifts, and other people who may be affected, according to lift plan requirements. |
| 1. A check is completed to ensure workers assisting with the lifts, and others who may be affected, are in their positions ready for the lifts to begin. |
| 1. Operator has confirmed with the Dogman / Rigger to ensure the loads are correctly attached. 2. Loads are lifted and placed according to lift plan and rating chart. |
| 1. Put the tower crane into out-of-service condition. | 1. Crane is put into out-of-service condition and equipment used for the lift is returned to storage. |
| 1. Documentation is completed and action is taken for any defects in the crane and/or equipment. |

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

Assessment specifications:

Pre start checks follow manufacturer requirements and site requirements.

Control measures for the planned lift may include equipment, powerlines, service lines, trees, buildings, structures, unauthorised people, exclusion zones, wind and weather, simultaneous activities.

Positioning of the crane includes consideration of rating charts, weather conditions, height, boom position and angle, radius, load weight.

Others who may be affected by the lift include riggers, slingers, dogmen, supervisor and public.

Documentation includes logbooks, records, job sheets, crane equipment inventories, maintenance requests.

*Company requirements* refer to instructions to staff on policy and procedures, which are documented in memo or manual format and available in the workplace. These requirements may include site specific requirements, company quality management requirements, Approved Codes of Practice and guidelines, and legislative requirements.

*Industry good practice* meets requirements of the Approved Code of Practice for Cranes, Approved Code of Practice for Load-lifting Rigging, and the Crane Safety Manual.

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

*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, repetitively lifted.

For the assessment:

* A verifier must observe and document the candidate completing a minimum of 40 lifts with at least six variations of lifting operations that may include site, crane, loads, and communication methods; and
* At least two irregular loads, including one where the centre of gravity is offset, must be observed by the assessor.

**Ngā momo whiwhinga** | Grades available

Achieved.

**Ihirangi waitohu** | Indicative content

* Hazards associated with tower crane operation (e.g., climbing the crane) and weather conditions.
* Operation of a tower crane (rating charts, range diagrams, boom clash agreements).
* Lock-out and tag-out requirements.

**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.