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| **Crane 6** | **Operate a self erecting tower crane to lift and place regular loads safely** |

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| **Kaupae |** Level | 3 |
| **Whiwhinga |** Credit | 15 |
| **Whāinga |** Purpose | This skill standard recognises the skills to complete pre-start checks and operate a self-erecting tower crane.  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 2 *Apply knowledge of slinging and communication to a lifting operations context 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. Complete pre lift activities for a self-erecting tower crane. | 1. Pre-start checks are completed in accordance with manufacturer’s specifications and/or company requirements. |
| 1. Pre-start documentation is completed, and remedial action is taken for any defects. |
| 1. Potential hazards and risks are identified, including environmental conditions, and appropriate controls are implemented. |
| 1. An appropriate plan is referred to. |
| 1. Move regular loads with a self-erecting tower crane. | 1. Crane is put into in-service condition according to manufacturer’s specifications. |
| 1. Lifting requirements are completed safely. |
| 1. Crane is put into out-of-service condition according to manufacturer’s specifications and/or onsite conditions, and equipment used for the lift is returned to storage. |

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

Assessment specifications:

Pre-start checks of the crane are in line with manufacturers guidance or company requirements

Selecting lifting equipment and checking for any issues.

Pre-start documentation may include logbook, inspection template.

Lift planning must ensure that the operator can maintain full visibility of the loads during the entire lift.

Lift plan must include weight calculations for regular loads, centre of gravity, identified hazards / risks and controls, appropriate lifting equipment and configuration, person directing the lift and communication methods to be used, as appropriate.

Lifting requirements include configuring the hook block according to the load, slewing, trolleying / luffed, and hoisting the crane to position to the hook in optimal position to lift and place the load, confirming the load is securely attached and operational area is clear, lifting and placing the load according to manufacturer’s load charts and range diagrams.

Communication methods refer to self-erecting tower crane hand signals, radio, and may include other methods as appropriate.

Lifting equipment may include wire slings, chains, magnets, synthetic slings, lifting beams, spreader bars.

Onsite conditions include location of power supply, condition of remote-control battery, obstructions in slew path.

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

Assessment must involve six verified lifts, and two assessor observed lifts.

***Ngā momo whiwhinga |*** *Grades available*

Achieved.

**Ihirangi waitohu |** Indicative content

* Hazards associated with self-erecting tower crane operation.
* Purpose of a boom clash agreement.
* Procedures for putting self-erecting tower cranes in-service and out-of-service, the reasons for carrying out these procedures, and consequences of failing to do so.
* Function and relevance of the Certificate of Inspection.
* Complete prestart and maintenance checks.
* Lifting equipment terminology for functions of critical components and equipment.
* Review and confirm self-erecting tower crane position – height, boom position, boom angle, radius, weather conditions, location of obstructions, visibility of proposed load path.
* Procedures for care and use of lifting equipment.
* Out-of-service condition (i.e., weathervane – free slew).

**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.