

40834 Calculate and sling irregular loads for lifting operations

Kaupae Level	4
Whiwhinga Credit	25
Whāinga Purpose	<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 calculate and sling irregular loads for lifting operations.</p> <p>This skill standard may contribute to New Zealand qualifications designed for crane operation.</p>
Whakaakoranga me mātua oti Pre-requisites	Skill Standard 40842 <i>Plan lifts for regular and irregular loads</i> , or equivalent skills and knowledge.

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Calculate and sling irregular loads for lifting operations.	a. Calculations of load weight and centre of gravity are completed in preparation for rigging.
	b. Irregular loads are prepared and rigged according to the rigging plan and industry good practice.
	c. Features of load stability and lifting equipment that may affect safe operation of the crane are determined.
	d. Lifting equipment is selected and rigging equipment is used for the load according to industry good practice.
	e. Lift plan is developed for the lifting operation.
	f. Packing and dunnage is selected and applied to crane lift situations according to industry good practice.

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

Assessment specifications:

- Cranes with either a 10-tonne minimum capacity or tower crane/self-erecting tower crane with a 4-tonne minimum capacity must be used.
- Experience must be demonstrated via verifier documented and observed slinging of lifts.
- A minimum of 40 lifts with at least six variations of lifting operations which may include site, crane, loads, and communication methods.
- At least two irregular loads, including one where the centre of gravity is offset, must be observed by the assessor.

Features of load stability and lifting equipment that may affect safe operation of the crane may include weather, weight of load, site conditions, centre of gravity, nature and stability of the load.

Definitions:

Industry good practice refers to 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 two or more of the following characteristics: unequal weight distribution, eccentric loading, irregular shape and proportions, with or without set lifting points.

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

- Purpose and use of different lifting equipment (ropes, chains, web slings, lifting clutch and eye inert, shackles, spreader bar, chain hoist, equaliser, chain block, lifting beams, eye bolts, concrete lifting systems).
- Practices of the dogman that may affect stability of the load.
- Types of packing that may be used.

Rauemi | Resources

- Approved Code of Practice for Cranes, available from www.worksafe.govt.nz.
- Company quality management systems and policies.
- Crane Programme Guidance, available from qualifications@waihangaararau.nz.
- Crane Safety Manual: For Crane Operators & Dogmen (Crane Association of New Zealand), available from www.cranes.org.nz.
- Equipment manufacturers' operating instructions.

Pārongo Whakaū Kouna | Quality assurance information

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	0120

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	27 November 2025	N/A
Kōrero whakakapinga Replacement information	This skill standard replaced unit standard 3801.		
Rā arotake Planned review date	31 December 2030		

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