

41192 Install anchor systems for industrial rope access

Kaupae Level	5
Whiwhinga Credit	5
Whāinga Purpose	This standard is intended for people who are working in a range of work settings that require the use of advanced level industrial rope access skills when working at height or in places with difficult access. People with this skill standard will be able to apply knowledge and skills to select, design, install and inspect anchor systems for industrial rope access. This skill standard contributes to credentials for industrial rope access services.
Whakaakoranga me mātua oti Pre-requisites	Skill standard 41191 <i>Operate as an intermediate level industrial rope access technician</i> , or evidence of equivalent knowledge and skills.

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Install anchor systems for industrial rope access.	a. Select anchor types and equipment to ensure redundancy and meet safety requirements in rigging systems.
	b. Design and document anchor layouts that comply with engineering and safety standards.
	c. Construct anchor points and install chemical anchors and mechanical anchors compliant with the manufacturers' specifications.
	d. Inspect and verify anchor points to ensure they are serviceable, safe, and compliant with manufacturer and certification requirements.
	e. Evaluate the suitability and load capacity of permanent and temporary anchor systems for the intended work and rescue scenarios.

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

Assessment specifications:

Candidates must be capable of installing anchor systems for industrial rope access in a safe manner to current industry requirements and regulatory requirements and evaluate the anchor systems for both the intended work and rescue scenarios

Assessment must be carried out under supervision of an advanced rope access technician who has the responsibility for safety and execution as a technical lead in line with requirements of AS/NZS ISO 22846 Industrial Rope Access in NZ: Best Practice Guidelines.

Definitions

Chemical anchors are fastening systems that use a chemical bonding agent (resin or adhesive) to secure a threaded rod, rebar, or anchor bolt into a drilled hole in a base material (usually concrete or masonry). They are used in creating permanent or semi-permanent anchor points.

Mechanical anchors are fastening devices that achieve holding power through mechanical expansion or friction against the sides of a drilled hole. They are used in creating temporary anchor points or situations needing rapid setup.

Redundancy is the principle of having independent backup components in a rope access system so that no single failure can cause a loss of safety

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

- Anchor systems, including their limitations and the sources of these requirements
- Proprietary anchor systems
- Load sharing and deviation anchors
- Anchor system design
- Compliance requirement, including Producer Statements – PS1, PS3 and PS4
- Inspection, examination and certification requirements for permanent and constructed anchor systems
- Static vs dynamic loading situations
- Axial vs nonaxial loading considerations
- Anchors vs anchorage
- Structural considerations and authority to modify.
- Permanent system installation practices
- Eye bolts, Chemical and Mechanical installations
- Placed anchors in a rope access application, beam clamps, trolleys, door braces, and parapet clamps
- Counterbalance equations and Levers
- Counterweight Needle configuration set up (risk and safety perspective)
- Winching systems and fall protection
- Tripods and Gantries Set up
- David systems.
- Risk factors for each anchor type and configuration.

Rauemi | Resources

Legislation, regulations and/or industry standards relevant to this skill standard include but are not limited to:

- AS/NZS ISO 22846 Industrial Rope Access in New Zealand: Best Practice Guidelines available on <https://www.worksafe.govt.nz/>
- Rope Access Certificate of Competence Scaffolding, Access and Rigging New Zealand <https://www.sarnz.co.nz/cocs/rope-access-certificate-of-competence/rope-access-certificates-of-competence>
- WorkSafe. (2019). *Best practice guidelines for working at height in New Zealand*. <https://www.worksafe.govt.nz/topic-and-industry/working-at-height/working-at-height-in-nz/>
- EN361 Personal protective equipment against falls from a height: Full body harnesses, available at <https://www.en-standard.eu/>
- AS/NZS ISO 22846.2:2020 Personal equipment for protection against falls - Rope access systems, Part 2: Code of practice <https://www.standards.govt.nz/shop/asnzs-iso-22846-22020>.

Where the resources have been updated, please refer to the latest version.

Pārongo Whakaū Kouna | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Construction and Specialist Trades Industry Skills Board
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Service Sector > Lifting Equipment > Industrial Rope Access
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	28 May 2026	N/A
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	31 December 2031		

Please contact the Construction and Specialist Trades Industry Skills Board at info@cstisb.nz if you wish to suggest changes to the content of this skill standard.