

40431**Carry out inspection and maintenance of wire ropes in passenger ropeways**

Kaupae Level	4
Whiwhinga Credit	5
Whāinga Purpose	<p>This skill standard is for people already working in the passenger ropeway sector to carry out inspection and maintenance of wire ropes in passenger ropeways.</p> <p>This skill standard may be used in programmes leading to qualifications and micro-credentials at Level 3 and above in passenger ropeway systems and maintenance.</p>

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Explain the components and types of wire rope and splices.	a. Explain the fundamental components of wire ropes used in passenger ropeways.
	b. Identify the different types of wire ropes and their applications in passenger ropeway systems.
	c. Describe the components and construction of splice(s) commonly used in passenger ropeways and explain their roles in ensuring their structural integrity and reliability.
2. Explain the bending cycles and strategies to mitigate fatigue of wire ropes in passenger ropeways.	a. Explain bending cycles in the context of wire ropes in passenger ropeways.
	b. Explain the impact of bending cycles on wire ropes' lifespan and structural integrity.
	c. Explain strategies to mitigate fatigue and extend the operational life of wire ropes, including the importance of lubrication in preventing wear and corrosion of wire ropes.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Carry out inspection and maintenance of wire ropes and splices in passenger ropeways.	a. Identify potential hazards associated with wire rope inspection and maintenance and apply relevant control measures.
	b. Carry out inspection of wire ropes and splices.
	c. Carry out non-routine inspection of wire ropes and splices necessitated by extraordinary events and/or weather conditions.
	d. Implement appropriate action(s) based on the inspection results.
	e. Carry out maintenance of wire ropes and splices based on environmental and operational considerations in accordance with manufacturers' recommendations.
	f. Complete relevant documentation of inspection findings, maintenance activities, and any required follow-up actions in accordance with the organisation's requirements.

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

Assessment specifications:

Evidence for assessment may include participation in simulated or real-world scenarios to assess the practical application of skills to wire rope inspection and maintenance.

It is recommended that people hold credits for skill standards, 40425 *Explain regulations and compliance requirements for passenger ropeway operations*, and 40426, *Explain non-destructive testing (NDT) principles and applications for passenger ropeways* before being assessed against this skill standard or demonstrate equivalent knowledge and skills.

Definition:

Extraordinary events and/or weather conditions refer to incidents that could impact the integrity and operations of the wire ropes and splices, such as – storms, lightning strikes, excessively high winds, fire, derailments, impacts on equipment, and mechanical issues.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

- Control measures such as – lockout, safe zone.
- Inspections such as – visual inspection and twist assessment inspection.
- Maintenance such as – lubrication, cleaning.

Rauemi | Resources

Legislation, regulations and/or industry standards

- Health & Safety at Work Act 2015
<https://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html>.
- Pressure Equipment, Cranes and Passenger Ropeways Regulations 1999 (PECPR)
<https://www.legislation.govt.nz/regulation/public/1999/0128/latest/DLM284452.html>.
- NZS 8635:2018 Passenger ropeways and passenger conveyors, available at
<https://www.standards.govt.nz/shop/nzs-86352018>.
- Manufacturers' specifications.
- Workplace operation procedures.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Engineering and Technology>Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0013

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	30 January 2025	NA
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	31 December 2029		

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council at qualifications@hangaarorau.nz if you wish to suggest changes to the content of this skill standard.