

40035 Apply quality assurance and control principles and processes in an engineering environment

Kaupae Level	3
Whiwhinga Credit	10
Whāinga Purpose	<p>This skill standard is for people who want to apply and undertake quality assurance and control principles and processes to ensure the given engineering task or product is fit for purpose and meets customer/engineers' requirements.</p> <p>This skill standard can be used in any engineering qualification at Levels 3 and above.</p>

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

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Use job drawings and specifications to determine quality, customer and/or engineering requirements.	a. Interpret technical drawings, including symbols, dimensions, tolerances, and technical information, to clarify the task or product design and quality requirements.
	b. Confirm task or product specifications and engineering requirements with the supervisor.
	c. Document and verify queries with the supervisor to ensure compliance with quality requirements.
2. Apply workplace quality management practices to ensure that work processes and products meet required quality criteria and requirements.	a. Apply established quality standards and procedures in the workplace to meet required specifications.
	b. Verify that established quality standards, procedures, and protocols are followed and are fit for their intended purpose.
	c. Collect data and report findings related to quality assurance and control activities, maintaining records and communicating quality-related information to relevant supervisor.
3. Perform inspection and use testing methods to verify task or product quality and compliance with specifications.	a. Perform a variety of inspections and use testing methods and appropriate equipment to meet the specific quality control requirements of the task or product.

	b. Use measuring equipment to ensure the task or product meets defined quality requirements during the inspection.
	c. Verify that the task or product meets quality standards and complies with specifications.
4. Perform troubleshooting of quality issues and faults found during the quality control process.	a. Identify common quality faults, such as measurement discrepancies, cut quality issues, and finish quality problems.
	b. Rectify faults or quality issues as per workplace procedures.
	c. Identify and consult with appropriate personnel and collaborate to address quality issues.
	d. Perform preventive actions to avoid the recurrence of quality issues.

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

Assessment specifications

- Evidence presented for assessment against this skill standard must be consistent with safe work practices and be in accordance with applicable industry standards, workplace procedures and legislative requirements.
- Evidence must demonstrate the learner's competence to undertake the skills and knowledge under limited supervision detailed in this skill standard.
- A variety of forms of evidence is accepted, such as photos, signed observation sheets, video recordings, written reports, oral presentations, etc.
- Use of appropriate, safe facilities, equipment, and resources to undertake assessment tasks effectively and safely.
- Practical assessment tasks must be verified and signed by a verifier who has relevant current industry expertise.

Definitions

- *Engineering environment* refers to the encompassing conditions, both physical and contextual, wherein engineering tasks or activities occur, directly or indirectly influencing and being influenced by its surroundings.
- *Industry standards* refer to adherence to guidelines set by professional bodies to ensure consistency, quality, and safety, complying with industry regulations and best practices.
- *Legislative requirements* refer to laws enacted by government bodies to ensure worker safety, rights, and welfare, covering areas such as health and safety, employment rights, and environmental protection, with compliance avoiding legal consequences and penalties.
- *Safe work practices* refer to practices that minimize risks to workers' health and safety, following government WorkSafe legislation. This includes identifying and mitigating risks, providing protective gear and training, and fostering a safety-conscious culture.

- *Workplace procedures* refer to established protocols for smooth operations, dictating task performance and safety measures, promoting consistency and productivity in a safe work environment.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

Quality Assurance and Control (QAQC)

- Self-assessment for QAQC
- Technical drawing interpretation for QAQC
- Effective communication in QAQC
- Adherence to quality standards and procedures in QAQC
- Data collection and reporting for QAQC
- Inspection and testing methods in QAQC
- Reliable measurement and quality standards compliance.

Identifying and Addressing Quality Issues

- Identification of common quality faults
- Corrective actions to reduce quality issues in engineering tasks
- Collaboration with supervisors for complex quality issues.

Continuous Improvement and Preventive Actions

- Preventive actions and continuous improvement in QAQC.

Rauemi | Resources

None.

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 > Engineering Core Skills
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 May 2024	N/A
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 qualifications@hangaarorau.nz to suggest changes to the content of this skill standard.