

40382

Explore the function and design of unfired pressure equipment used in the energy and chemical industry and plant

Kaupae Level	3
Whiwhinga Credit	5
Whāinga Purpose	<p>This skill standard is intended for people working as boiler operators and energy and chemical process operators in an energy and chemical plant.</p> <p>People credited with this skill standard are able to describe unfired pressure equipment used in the energy and chemical industry and plant.</p> <p>This skill standard can be used in the New Zealand Energy and Chemical qualifications at Level 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. Describe the function and design of unfired pressure equipment used in the energy and chemical industry.	a. Describe types of unfired pressure equipment in terms of their use.
	b. Describe the use of carbon steel and alloy steel in the construction of unfired pressure vessels in terms of its purpose.
	c. Describe internal features of unfired pressure vessels in terms of their purpose.
	d. Describe external features of unfired pressure vessels in terms of their purpose.
2. Describe the function and design of unfired pressure equipment used in an energy and chemical plant.	a. Describe unfired pressure equipment used at a plant in terms of their types and in accordance with organisational requirements.
	b. Describe types of unfired pressure equipment in terms of the plant identification coding system and their purpose and in accordance with organisational requirements.
	c. Describe the components of the unfired pressure equipment in terms of the process flows and normal operating parameters of the equipment and in accordance with organisational requirements.

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

Assessment specifications:

- evidence for the practical components of this skill standard must be supplied from the workplace.
- 1a: evidence of four (4) types is required.
- 1c: internal features include but are not limited to – impingement plates, deflectors, standpipes, boots, trays, packing, demister pads, weirs, distributors.
- 1d: external features include but are not limited to – gauge glass, safety valves, compensation plates, instrumentation, vents, drains.
- Outcome 2: evidence of three (3) types of equipment is required.

Definitions:

Energy and chemical plant may be in – petrochemical, agri-nutrient, power generation, dairy processing, meat processing, and wood fibre manufacturing, or other plants that operate with a combination of high temperatures, pressures, steam and/or chemicals in gas, liquid or solid form.

Organisational requirements – documented policies and procedures. These may include: equipment manufacturers' procedures; plant procedures; suppliers' instructions; site signage; codes of practice; company health and safety plans; on site briefings; and supervisor's instructions. This includes all regulatory and legislative obligations that apply to the plant.

Plant – the operational unit, equipment and/or workplace at which the person is working.

Unfired pressure equipment – equipment that is operated under pressure but is not directly fired.

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

None

Rauemi | Resources

Legislation relevant to this unit standard include but is not limited to:

- Health and Safety at Work Act 2015;
 - Hazardous Substances and New Organisms Act 1996;
 - Resource Management Act 1991;
- and any subsequent amendments.

Pārongo Whakaū Kouna | 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	Manufacturing > Energy and Chemical Plant > Operation of Energy and Chemical Plant
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0079

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	27 March 2025	N/A
Kōrero whakakapinga Replacement information	This skill standard replaced unit standard 28161.		
Rā arotake Planned review date	31 December 2029		

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