### Field Engineering and Technology

#### Revision of *Mechanical Engineering* unit standards

Subfield	Domain	ID
Mechanical Engineering	Engineering - Materials	4797, 4802, 20799, 20917
	Engineering - Measurement	4432

Competenz has completed the revision of the unit standards listed above.

Date new versions published

November 2011

Planned review date

December 2016

### **Summary**

These unit standards had been registered on 17 June 2011. Some changes are required to make assessment possible for candidates from across the mechanical engineering disciplines, including difficulties with the interpretation of some outcomes in these unit standards.

## Main changes

- Titles of unit standards 4797 and 20799 now refer to 'common engineering metals' and the word 'basic' has been removed from the title of 20799.
- Explanatory notes of unit standard 4432 now refer to the International System of Units (SI), and include definitions for SI and Imperial units.
- Purpose statements, some outcome statements and evidence requirements have been updated in unit standards 4432, 20799 and 20917.
- Some ranges have been updated in each standard.
- References mentioned in 4797 and 20799 have been updated.

#### Impact on registered qualifications

Key to type of impact		
Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set	
	The qualification lists a standard that has changes to level or credits	
	The qualification lists a C or D category standard	
Not materially affected		
	The qualification lists a standard that has a new classification	

The following Competenz qualifications are not materially affected by the outcome of this revision and will be updated when they are next reviewed.

Ref	Qualification Title	Classification or ID
0122	National Certificate in Engineering - Fabrication (Level 4) with strands in Heavy Fabrication, Light Fabrication, and Steel Construction	20799
0124	National Certificate in Heating, Ventilating, and Air Conditioning (Mechanical Services) (Level 4)	20799
0129	National Certificate in Metal Casting (Technology)	4797, 20799
0130	National Certificate in Refrigeration and Air Conditioning (Level 4)	20799
1220	National Certificate in Mechanical Engineering (Level 2)	20799
1262	National Certificate in Mechanical Engineering (Level 4) with strands in Fitting and Machining, General Engineering, Machining, Maintenance Engineering, Toolmaking, and Electricity Supply	4797, 20799
1387	National Certificate in Manufacturing (Metal and Related Products) (Level 3)	20799
1388	National Certificate in Manufacturing (Metal and Related Products) (Level 4)	20799
1615	National Certificate in Welding (Level 3)	4797, 20799

The following table identifies qualifications developed by other SSBs that are not materially affected by the outcome of this revision. The SSBs have been advised of this impact.

Ref	Qualification Title	Classification or ID	SSB Name
0742	National Certificate in Aeronautical Engineering (Aircraft Manufacture)	4797, 20799	Aviation, Tourism and Travel Training Organisation
1294	National Certificate in Electricity Supply (Electrical) (Level 3) with strands in Electricity Supply Electrician, Electrical Fitter, and Electrical Technician	20799	Electricity Supply ITO
0394	National Certificate in Plastics Processing Technology (Technical) (Level 2) with strands in Injection Moulding, Extrusion, Blow Moulding, Pressure Thermoforming, Vacuum Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch-Blow Moulding	20799	Processing ITO Plastics and Materials Processing ITO
1235	National Certificate in Engineering and Technology (Pharmaceutical and Allied Products) (Level 2)	20799	
1378	National Certificate in Engineering and Technology (Glass Container Mould Maintenance) (Level 2)	20799	
1379	National Certificate in Engineering and Technology (Glass Container Mould Maintenance) (Level 3)	4797	
1407	National Certificate in Engineering and Technology (Plastics Engineering) (Level 4) with strands in Injection Moulding, Extrusion, Blow Moulding, Pressure Thermoforming, Vacuum Thermoforming, Blown Film Extrusion, Film Conversion, Injection Stretch-Blow Moulding, and Rotational Moulding	4797, 20799	
0635	National Certificate in Gas Industry (Gas Engineering) with strands in Gas Network Operations, Gas Network Planning and Development, and Gas Utilisation	4797, 20799	NZ Extractive ITO
1414	National Certificate in Motor Industry (Automotive Body) (Level 4) with strands in Coachbuilding, Collision Repair, and Refinishing	20799	NZ Motor ITO

# Detailed list of unit standards - classification, title, level, and credits

All changes are in **bold**.

Engineering and Technology > Mechanical Engineering > Engineering - Materials

ID	Title	Level	Credit
4797	Demonstrate knowledge of the composition of engineering metals	3	5
	Demonstrate knowledge of the composition of common		
	engineering metals		
4802	Complete heat treatment of engineering metals in a furnace	4	10
20799	Demonstrate basic knowledge of engineering metals	3	4
	Demonstrate knowledge of common engineering metals		
20917	Demonstrate basic knowledge of engineering materials	2	2

ID	Title	Level	Credit
4432	Demonstrate knowledge of, and convert, units of measure	2	2
	used in engineering		