

Field Engineering and Technology**Review of *Metal Casting* unit standards**

Subfield	Domain	ID
Mechanical Engineering	Metal Casting	2371, 2373-2382, 2384-2386, 15130-15132, 19449, 19741, 19742, 21471

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

Date new versions published**September 2016****Planned review date****December 2021****Summary**

The unit standards were reviewed to align with the recently registered New Zealand Certificates in Mechanical Engineering and to meet Competenz' s ongoing unit standard review schedule.

The review was carried out in consultation with the mechanical industry technical experts and some new unit standards were developed. Unit standards that have had very low usage have been set to expire.

The changes were endorsed by industry technical groups.

Main changes

- Changes were made to outcome statements, evidence requirements, and range statements to clarify assessment requirements, ensure alignment with current industry requirements, and to correct grammatical errors.
- Explanatory notes and evidence requirements were updated and practical standards were updated to use an overarching standardised reference to the term workplace procedures to replace operating procedures, company procedures, and enterprise procedures.
- Five low-use unit standards have been designated expiring with no replacements.

The last date for assessment of superseded versions of review category B standards is 31 December 2018. Results will not be accepted where the assessment date is after the last date for assessment of the superseded version of the standard.

Category D unit standards will expire at the end of December 2016

Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Engineering and Technology > Mechanical Engineering > Metal Casting

ID	Title	Level	Credit	Review Category
2371	Produce metal castings using gravity die casting machine	2	5	B
2373	Work safely with molten metals	2	3	B
2374	Prepare and mix sand for metal casting processes	3	12	B
2375	Produce moulds and cores by hand for metal casting processes	4	25	B
2376	Produce moulds and cores using machines for metal casting processes	2	10	B
2377	Produce molten metal using metal melting furnace	3	20	B
2378	Pour molten metal into moulds	2	5	B
2379	Finish metal castings	2	15	B
2380	Inspect and test metal castings	3	15	B
2381	Inspect and repair refractory linings and crucibles used in metal casting processes	3	15	B
2382	Produce expendable wax patterns for lost wax casting method	2	5	B
2384	Develop a metal casting process to meet client's needs	5	30	D
2385	Repair porosity in metal castings using the impregnation method	2	3	D
2386	Produce ceramic shell moulds for use in the investment casting process in metal casting	3	15	B
15130	Provide solutions for casting defects	5	15	B
15131	Determine the inclusion content of steel	5	10	B
15132	Prepare metallographic sample	4	10	D

ID	Title	Level	Credit	Review Category
19449	Prepare for and perform chemical analysis using optical emission spectrometry equipment	4	5	B
19741	Demonstrate knowledge of common die casting defects	2	5	B
19742	Operate a pressure die casting machine under supervision	2	10	D
21471	Produce metal castings using pressure die casting machine	3	12	D