



Australian Government

RIIPSM302D Cast ingots

Release: 3

RIIPSM302D Cast ingots

Modification History

Release	Comment
1	This unit replaces RIIPSM302A Cast ingots
2	Inserted Performance Evidence
3	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to apply cast ingots in Metalliferous mining.

This unit is appropriate for those working in operational roles.

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Unit Sector

Metalliferous mining

Elements and Performance Criteria

1. Plan and prepare for casting operations	1.1 Access, interpret and apply smelting documentation and ensure the work activity is compliant 1.2 Receive, interpret and clarify shift change over details 1.3 Select and wear appropriate personal protective equipment 1.4 Select and use appropriate plant, tools and equipment for the work activity 1.5 Perform plant, tools and equipment pre-start checks 1.6 Carry out start-up procedures 1.7 Identify, address and report potential risks, hazards and
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	environmental issues and implement control measures 1.8 Communicate with other equipment operators 1.9 Access, interpret and adhere to emergency procedures 1.10 Ensure area is well ventilated 1.11 Adjust mould, launder and ladle system for work activity
2. Prepare moulds/laundry system	2.1 Dress moulds/laundry system 2.2 Check for faults or defects 2.3 Prepare moulding pit 2.4 Dry product 2.5 Strip and cleanout moulding pit, where required 2.6 Check cooling system is fit for operation
3. Cast metal	3.1 Teem/tap liquid metal into ladles and/or laundry system, where required 3.2 Cast liquid metal into moulds 3.3 Test temperature and obtain a sample of the liquid 3.4 Identify variances and adjust the composition with additives 3.5 Monitor cast during work activity
4. Remove cast metal	4.1 Knock off mould plates when mould has been bumped out 4.2 Identify faults to launders, report and repair 4.3 Identify and remove damaged and faulty moulds 4.4 Remove slides from ladles, identify faults, repair and reposition slides 4.5 Inspect for quality, chips and marks 4.6 Prepare ingots, anodes or bullion for transport and storage
5. Shutdown in sequence and/or isolate equipment	5.1 Shutdown and/or isolate equipment 5.2 Perform post shutdown and/or isolation checks
6. Conduct housekeeping activities	6.1 Clean, check, maintain and store plant, tools and equipment 6.2 Report issues identified with plant, tools and equipment

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIIPSM302A Cast ingots

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIPSM302D Cast ingots

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:

- locates and applies relevant documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of casting ingots including:
 - handling additives safely
- works effectively with others to undertake and complete the casting of ingots that meets all of the required outcomes including:
 - complying with written and verbal reporting requirements and procedures
 - communicating clearly and concisely with others to receive and clarify work instructions and coordinate work activities
- demonstrates completion of the casting of ingots that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - conducting equipment pre-start checks and start-up procedures
 - preparing, stripping out and cleaning moulding pit
 - casting liquid metal to moulds
 - taking temperature and obtaining samples of the liquid
 - repairing launders
 - shutting down and/or isolating equipment

Knowledge Evidence

The candidate must demonstrate knowledge in applying the cast ingots through:

- identifying potential dangers inherent in specific plant and equipment
- identifying specifications of moulds, bottom plates, trumpets, ingots, anodes, bullion
- applying the process to different base metals
- identifying ingot, anode and bullion weight and markers relationship

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,
- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil	3-6	5 Years

Construction		
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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