



Australian Government

RIIPSM304D Operate furnaces

Release: 3

RIIPSM304D Operate furnaces

Modification History

Release	Comment
1	This unit replaces RIIPSM304A Operate furnaces.
2	Corrected Performance Criteria numbering.
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 operate furnaces 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 furnace operations	1.1 Access, interpret and apply smelting documentation and ensure the work activity is compliant 1.2 Receive, interpret and clarify shift changeover details 1.3 Establish and maintain communications with other personnel 1.4 Select appropriate personal protective equipment 1.5 Identify, address and report potential risks, hazards and environmental issues and implement control measures 1.6 Check records and record outstanding maintenance inspections and identified defects
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2. Start-up furnace	2.1 Complete computer systems and equipment pre-start checks 2.2 Start-up furnace 2.3 Stabilise system to produce in-specification product
3. Monitor and control the smelting process	3.1 Complete routine checks, logs and written documentation 3.2 Identify potential and actual faults 3.3 Minimise the impact of potential and actual problems on safety, health, the environment and the business 3.4 Monitor and trim plant to achieve required rates and quality 3.5 Operate furnace
4. Shutdown furnace	4.1 Determine type of shutdown required 4.2 Give appropriate warnings of shutdown 4.3 Shutdown furnace system

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

RIIPSM304A Operate furnaces

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 RIIPSM304D Operate furnaces

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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
- works effectively with others to undertake and complete furnace operations 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 furnace operations that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - conducting computer systems and equipment pre-start checks
 - starting-up furnace
 - completing checks, log and paperwork
 - operating furnace
 - shutting down furnace system

Knowledge Evidence

The candidate must demonstrate knowledge of the following when operating furnaces:

- identifying furnace components:
 - insulation (refractory)
 - physics of operation

- chemistry of operation
- identifying importance of flame patterns/flame impingement
- applying methods to resolve problems
- identifying and applying principles of operation

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 Construction	3-6	5 Years
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.
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*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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