



Australian Government

RIIPSM305D Operate converters

Release: 2

RIIPSM305D Operate converters

Modification History

Release	Comment
1	This unit replaces RIIPSM305A Operate converters.
2	Performance Criteria numbering corrected. 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 converters 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 converter operation	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 for the work activity 1.5 Check and test control and monitoring systems 1.6 Select appropriate type of auxiliary equipment 1.7 Carry out computer systems and equipment pre-start checks 1.8 Identify, address and report potential risks, hazards and
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	environmental issues and implement control measures 1.9 Follow emergency procedures 1.10 Ensure approved dust suppression and extraction methods are in place 1.11 Ensure work area is adequately ventilated
2. Start-up converter	2.1 Perform pre-start checks 2.2 Carry out start-ups from standby and after maintenance 2.3 Carry out first charge 2.4 Stabilise the system
3. Monitor and control the process	3.1 Complete routine checks, logs and written paperwork 3.2 Identify and address signs of potential and actual problems 3.3 Monitor condition of metal and take action to maintain production schedule and quality 3.4 Monitor availability of feeds and take action to maintain production schedule and quality 3.5 Monitor and maintain blast air flow to converter 3.6 Monitor and maintain converter oxygen 3.7 Monitor cooling medium flow to converter to maintain converter temperatures 3.8 Maintain metal and gas temperatures 3.9 Control and monitor converter movement 3.10 Monitor and control rate and amount of additives to molten metal 3.11 Respond to warning alarms and lights and take action to rectify 3.12 Control and monitor metal and slag blow process and pouring 3.13 Complete written reports and log sheets
4. Maintain plant availability	4.1 Monitor plant throughout shift 4.2 Use measured/indicated data and sight to identify issues likely to impact on plant availability 4.3 Predict impact of change in one unit/area on other plant unit/areas and communicate to relevant personnel 4.4 Test trips and alarms 4.5 Inspect converter plant and rectify and/or report faults 4.6 Maintain furnace temperature during non-operating periods

	4.7	Operate Tuyere punching
	4.8	Prepare plant for maintenance
5. Shutdown converter	5.1	Determine type of shutdown required and give warning
	5.2	Shutdown furnace in required sequence
	5.3	Leave plant in a condition ready to restart

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

RIIPSM305A Operate converters

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 RIIPSM305D Operate converters

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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 converter 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 operating converters that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - completing computer system and equipment pre-start checks
 - completing converter start-up
 - completing checks, logs and paperwork
- monitoring and maintaining:
 - condition of metal
 - availability of feeds
 - blast air flow
 - converter oxygen
 - cooling medium flow to convertor
 - metal and gas temperatures
 - converter movement
 - rate and amount of additives

- metal and slag blow process and pouring
- inspecting converter plant and rectifying/reporting faults
- shutting down converter

Knowledge Evidence

The candidate must demonstrate knowledge in operating converters through:

- identifying auxiliary equipment types, purposes and operation
- identifying air, water and oxygen systems and their purpose
- identifying metal and slag blow purpose and applying method
- applying combustion principles
- applying principles of converter 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	1	1 Year

Mining, Extractive (Quarrying) and Civil Construction	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.	

*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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