



Australian Government

RIIPSM201D Tap furnaces

Release: 2

RIIPSM201D Tap furnaces

Modification History

Release	Comment
1	This unit replaces RIIPSM201A Tap furnaces
2	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 tap 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 tapping	1.1 Access, interpret and apply tap furnaces documentation and ensure the work activity is compliant 1.2 Obtain and clarify/confirm verbal and written work instructions before proceeding 1.3 Establish and maintain communication with other personnel using approved communication methods 1.4 Select and wear personal protective equipment appropriate for work activities 1.5 Identify, address and report potential risks, hazards and environmental issues and implement control measures 1.6 Obtain and interpret emergency procedures, and be prepared for an emergency
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	1.7 Use approved dust suppression and extraction methods 1.8 Ensure adequate ventilation to work area before commencing the work activity Select, and check for faults, tools and equipment for work activities 1.9 Set up equipment for tapping 1.10 Position holding vessels/ladles to receive molten metal and slag
2. Tap molten metal from furnace	2.1 Carry out plant and equipment start-up checks and procedures 2.2 Drill, or make tap hole with oxy lance, and establish molten metal flow 2.3 Ignite burners and correctly apply to ensure molten metal does not solidify 2.4 Identify and control interference with molten metal flow 2.5 Ensure quality and production targets 2.6 Collect samples at appropriate bath heights for metallurgical testing
3. Complete tapping process	3.1 Insert and secure tap-hole seal to stop molten metal flow 3.2 Clean and stow all tools and equipment in readiness for next tapping operation 3.3 Complete reports and written records
4. Maintain tapping equipment	4.1 Obtain and/ manufacture tap-hole seals 4.2 Replace temperature monitoring equipment 4.3 Remove and install tapping blocks 4.4 Provide support for maintenance personnel

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

RIIPSM201A Tap 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 RIIPSM201D Tap 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
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of furnace tapping including:
 - working with/handling high temperature materials
 - using safe lifting techniques
- using fault finding, rectification and reporting techniques
 - works effectively with others to undertake and complete the furnace tapping in a way that meets all of the required outcomes including:
 - using a range of communications techniques and equipment to receive and clarify work instructions
 - complying with written and verbal reporting requirements and procedures
- demonstrates completion of furnace tapping that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - completing start-up checks and procedures
 - using equipment indicator readings to maintain molten metal flow
 - identifying and reporting defects and hazards
 - drilling a tap hole with an oxy lance
 - collecting samples of molten metal
 - removing and installing tapping blocks

Knowledge Evidence

The candidate must demonstrate knowledge in furnace tapping through:

- applying the principles of furnace operation
- identifying the characteristics of molten metal
- identifying furnace tapping components
- applying combustion principles
- accessing, reading, interpreting and applying safe working procedures and systems
- accessing, reading, interpreting and applying plant requirements for various schedules
- accessing, reading, interpreting and applying service requirements and specifications

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	3-6	3 Years

(Quarrying)		
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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