



Australian Government

RIICRC323E Insert tie bars in fresh concrete

Release: 1

RIICRC323E Insert tie bars in fresh concrete

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to insert tie bars in fresh concrete in civil construction, including setting up operations, inserting and compacting tie bars and loading magazines.

It applies to those working in operational roles. They generally work under minimal supervision to undertake a broad range of tasks in varied work contexts, using some discretion and judgement in selecting equipment, services or contingency measures.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare to insert tie bars in fresh concrete	1.1 Obtain, interpret, clarify and confirm work requirements 1.2 Access, interpret and apply documentation required to insert tie bars in fresh concrete and confirm work activity is compliant 1.3 Identify and address potential risks, hazards and environmental issues and implement control measures 1.4 Select and wear personal protective equipment according to site requirements 1.5 Identify, obtain and implement signage requirements 1.6 Select plant, tools and equipment required to carry out tasks and check for faults

ELEMENT	PERFORMANCE CRITERIA
2. Set up operations	2.1 Verify quantity of bars according to job requirements 2.2 Inspect and confirm bars are fit for purpose according to job requirements 2.3 Inspect and confirm saw cut locations are marked out or programmed into paving computer according to job and site requirements 2.4 Check and confirm automatic program spacing according to job requirements 2.5 Check and confirm tie bar spacing and variations according to job requirements 2.6 Check for safe operations according to site requirements and confirm operation of emergency stops
3. Operate tie bar system	3.1 Maintain safe working area around tie bar inserter according to site requirements 3.2 Maintain required stock of bars at tie bar inserter according to job requirements 3.3 Operate and monitor tie bar insertion for specified location, alignment and depth according to job and site requirements 3.4 Report missed bars and jamming according to site requirements 3.5 Check and confirm location of missed and non-compliant insertion is recorded according to site requirements 3.6 Check and confirm concrete is compacted around tie bar according to job requirements 3.7 Load magazine according to job and site requirements 3.8 Monitor movements and hazards and identify and communicate changes to work environment according to site requirements
4. Conduct clean-up activities	4.1 Clear work area and dispose of, reuse or recycle materials according to site requirements 4.2 Clean, check, maintain and store machinery, tools and equipment according to manufacturer specifications and site requirements 4.3 Return unused stock bars to store according to site requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
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SKILL	DESCRIPTION
Numeracy	Calculates basic measurements including masses and dimensions
Self-management	Monitors and minimises own exposure to worksite risks and hazards during work activities

Unit Mapping Information

Supersedes and is equivalent to RIICRC323D Insert tie bars in fresh concrete.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for RIICRC323E Insert tie bars in fresh concrete

Modification History

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- insert tie bars in fresh concrete on at least two occasions, including:
 - setting up for safe operations
 - identifying and marking onsite changes in tie bar spacing according to job requirements
 - inserting and compacting tie bars to specified depth over 75 linear metres on at least three occasions
 - loading magazines
 - setting out inserted tie bars and marking out saw cut locations using:
 - at least one manual method
 - at least one automated program
 - clearing work area and disposing of, recycling or storing materials
 - cleaning, checking, maintaining and storing plant, tools and equipment.

During the above, the candidate must:

- locate and apply required documentation, policies and procedures and confirm work activity is compliant
- implement the requirements, procedures and techniques to insert tie bars into fresh concrete, including:
 - identifying and applying required specifications to all work activities
 - identifying, addressing and reporting potential hazards and risks
 - identifying, obtaining, confirming and implementing signage and barrier requirements
 - selecting and checking for faults all plant, tools and equipment required to carry out tasks
 - inspecting and confirming tie bars are appropriate for work tasks
 - identifying, addressing and reporting environmental issues

- work with others to insert tie bars into fresh concrete in a way that meets required outcomes, including:
 - preparing for and organising work activities to meet task requirements
 - communicating with others to receive and clarify work instructions
 - using communication techniques and aids to advise others of work activity
 - monitoring movements and hazards and identifying and communicating changes to work environment.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- policies, procedures and documentation required to insert tie bars in fresh concrete, including those relating to:
 - site requirements
 - manufacturer specifications for required plant and equipment
 - relevant job specifications
 - hazard and risk management
 - environmental protection
 - work activity set up procedures
 - communication techniques and aids
 - site isolation, signage and erecting barriers
 - work health and safety
 - waste management
- types, characteristics, technical capabilities and limitations of plant and equipment required to insert tie bars in fresh concrete
- principles and techniques for effective insert tie bars in fresh concrete, including:
 - techniques for setting up safe operations
 - techniques for inserting and compacting tie bars, including manual and automatic operations
 - magazine loading techniques.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment
 - equipment required to insert tie bars in fresh concrete
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,

- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year
	2	2 years
Drilling, Coal Mining,	3-6	3 years

Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure		
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.	

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**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 a minimum number of site assessments as determined by the relevant industry sector, across various locations.

***While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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