



Australian Government

Department of Education, Employment and Workplace Relations

RIIHAN304A Conduct slewing crane operations

Release: 2

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Modification History

Not applicable.

Unit Descriptor

This unit covers the operation of slewing cranes in the resources and infrastructure industries. It includes planning and preparing operation of the crane. The work required in this unit relates to the National Standard for High Risk Work. 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.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	1.1. Access, interpret and apply <i>compliance documentation</i> relevant to the work activity 1.2. Obtain, interpret and clarify/confirm <i>work requirements</i> in the form of shift briefings, handover details or work orders are before proceeding 1.3. Access and apply <i>safety information and procedures</i> throughout the work 1.4. Prepare work in accordance with AS2550, relevant legislation, <i>safety requirements</i> and manufacturer/site requirements 1.5. Carry out assembly and dismantling of boom/jib in accordance with relevant Australian standards, manufacturer's instructions and site requirements 1.6. Resolve coordination activities with others at the site prior to commencement of, and during, the work activity
2. Operate slewing crane	2.1. Carry out pre-start, start-up, park-up and shutdown procedures in accordance with relevant Australian standards, manufacturer and/or site requirements 2.2. Position, stabilise and level crane prior to commencement of lift operations in accordance with relevant Australian standards, manufacturer's specifications and approved man-basket operation procedures 2.3. <i>Prepare load</i> for lift in accordance with crane limitations and rigging requirements 2.4. Confirm the work area is clear and safe prior to commencing the lift 2.5. Use relevant <i>crane controls and functions</i> within manufacturer's specifications to effectively lift and position loads or personnel as required 2.6. Act on or report monitoring systems and alarms in accordance with site instructions/requirements 2.7. Recognise and respond to hazardous situations 2.8. Recognise and respond to emergency

	<p>situations in accordance with manufacturer's instructions and site procedures</p> <p>2.9. Complete work in accordance with the agreed plan and outcomes and within the operating capacities of the allocated equipment</p>
3. Travel crane	<p>3.1. Plan the route to be travelled to ensure that crane traverses firm and level surfaces</p> <p>3.2. Ensure necessary <i>hazard</i> identification and control measures are in place</p> <p>3.3. Travel the crane in accordance with relevant Australian standards, manufacturer's instructions and site requirements</p>
4. Carry out multiple crane lift	<p>4.1. Obtain approval to carry out a multiple crane lift from the appropriate statutory authority</p> <p>4.2. Plan multiple lift and obtain approval for lifting plan by an authorised person</p> <p>4.3. Carry out the previously authorised plan of operations under the supervision of and authorised person in accordance with the appropriate Australian Standard and other statutory regulations</p>
5. Carry out operator maintenance	<p>5.1. Carry out slewing crane inspections and fault finding in accordance with manufacturer's instructions and site requirements</p> <p>5.2. Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer's instructions and site authorised procedures and practices</p> <p>5.3. Carry out minor operator maintenance to manufacturer's instructions and site requirements</p> <p>5.4. Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements</p> <p>5.5. Process records in accordance with site requirements</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following as required to operate a slewing crane:

- apply legislative, organisation and site requirements and procedures for the operation of a slewing crane
- apply operational safety requirements
- access interpret and apply technical information
- calculate volume weights
- maintain equipment records
- apply hand-eye coordination to control functions
- use relevant hand tools
- apply diagnostic techniques
- comply with environmental requirements
- dispose of environmentally sensitive fluids and materials

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following as required to operate a slewing crane

- Australian standards related to cranes/lifting
- site and equipment safety requirements
- crane equipment characteristics, technical capabilities and limitations
- crane operational procedures
- crane maintenance systems and procedures
- basic geological and survey data related to slewing cranes
- basic rigging and slinging requirements
- hand and whistle signals
- site environmental requirements and constraints related to slewing cranes
- Hazchem relevant to slewing cranes

Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting slewing crane operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of conducting slewing crane operations • working with others to undertake and complete the slewing crane operations that meet all of the required outcomes • consistent timely completion of slewing crane operations that safely, effectively and efficiently meet the required outcomes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

	<ul style="list-style-type: none"> • Customisation of assessment and delivery environment should sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • implementation of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and complete the slewing crane operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards, including AS2550 • relevant state based legislation and regulations in relation to cranes • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>Work requirements may include:</p>	<ul style="list-style-type: none"> • crane equipment to be used • nature and scope of tasks • details of load chart/factors • achievement targets • working conditions • site lighting arrangements • defects on equipment • hazards and potential hazards • coordination requirements/issues
<p>Safety information and procedures may include:</p>	<ul style="list-style-type: none"> • relevant legislation and regulations • relevant Australian standards • management plans • relevant OHS policy • relevant code of practice • manufacturer's instructions • safe working or job procedures
<p>Safety requirements may include:</p>	<ul style="list-style-type: none"> • control and safety of slewing speed • selection and observance of safe working levels and angles • avoidance of obstacles and hazards • boarding and disembarking procedures • observation of wind restrictions • communications and signalling procedures
<p>Prepare load may include:</p>	<ul style="list-style-type: none"> • identification of load

	<ul style="list-style-type: none"> • identification and selection of lifting equipment • inspection and certification of lifting equipment • fitting of optional implements/accessories • management of permits and tags • selection of stable base • avoidance of obstacles and hazards
Crane controls and functions may include:	<ul style="list-style-type: none"> • boom up • boom down • boom extensions • hoist up • hoist down • manual jib and fly-jib extensions • slew
Hazards may include:	<ul style="list-style-type: none"> • power lines • trees • overhead service lines • bridges • surrounding buildings • obstructions • structures • facilities • other equipment • dangerous materials • earthworks • underground services • time of day
Plan multiple lifts may include:	<ul style="list-style-type: none"> • assessment of the load to be carried by each crane • determination of the types of cranes suitable for use • safety margins and hazard control measures to be used in the lift • sequence of operations
Minor operator maintenance procedures are those:	<ul style="list-style-type: none"> • established and authorised for the site <p>Note: depending on the site requirements, there may be circumstances in which operators do not perform these functions.</p>

Unit Sector(s)

Load Handling

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.