



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **RIIHAN305A Operate a gantry or overhead crane**

**Release: 1**

## **RIIHAN305A Operate a gantry or overhead crane**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This unit covers the operation of a gantry or overhead cranes in the resources and infrastructure industries. It includes planning and preparing, operating the crane and carrying out operator maintenance. The work described in this unit relates to the National Occupational Health and Safety Certificate Standards for Users and Operators of Industrial Equipment (NOHSC: 1006).

### **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 <b>compliance documentation</b> relevant to the work activity 1.2. Access, interpret and confirm <b>work requirements</b> prior to proceeding 1.3. Access and apply <b>safety information and procedures</b> throughout the work 1.4. <b>Prepare site</b> in accordance with AS2550, legislation and manufacturer/site requirements 1.5. Communicate with others to coordinate activities at the site prior to commencement of and throughout operations
2. Operate crane	2.1. Prepare load for lift in accordance with crane limitations and rigging requirements 2.2. Perform pre-start, start-up, park-up and shutdown procedures in accordance with relevant Australian standards, manufacturer's and/or site requirements 2.3. Confirm the work area <b>hazards</b> are removed or controlled prior to commencing the lift 2.4. Interpret <b>signals</b> in accordance with AS2550 2.5. Operate controls to lift, transfer and lower loads in accordance with manufacturer's instructions and site procedures 2.6. Monitor lift operations to ensure compliance with equipment limitations
3. Perform crane operator maintenance	3.1. Inspect crane for faults in accordance with manufacturer's instructions and site requirements 3.2. Perform routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer's instructions and site procedures 3.3. Process <b>records</b> in accordance with site requirements

## 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 gantry or overhead crane:

- apply legislative, organisation and site requirements and procedures for the operation of a gantry or overhead crane
- calculate volume, weights
- access interpret and apply technical crane information
- maintain crane equipment records
- use hand tools
- apply fault finding techniques with cranes
- 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 gantry or overhead 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 rigging and slinging requirements
- hand and whistle signals
- site environmental requirements and constraints related to cranes
- Hazchem relevant to overhead 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><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></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"> <li>• knowledge of the requirements, procedures and instructions for the operation of a gantry or overhead crane</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of the operation of a gantry or overhead crane</li> <li>• working with others to undertake and complete the operation of a gantry or overhead crane that meets all of the required outcomes</li> <li>• consistent timely completion of gantry or overhead crane operations that safely, effectively and efficiently meet the required outcomes</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those</li> </ul>

	<p>required on the job.</p> <ul style="list-style-type: none"> <li>• Customisation of assessment and delivery environment should sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• 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.</li> </ul>
<p><b>Method of assessment</b></p>	<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"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes</li> <li>• consistent achievement of required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to undertake and complete the operation of a gantry or overhead crane</li> </ul> </li> </ul>
<p><b>Guidance information for assessment</b></p>	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

## 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><b>Compliance documentation</b> may include:</p>	<ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• Employment and workplace relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul>
<p><b>Work requirements</b> may include:</p>	<ul style="list-style-type: none"> <li>• shift briefings</li> <li>• handover details</li> <li>• work orders</li> <li>• crane equipment to be used</li> <li>• nature and scope of tasks</li> <li>• details of load chart/factors</li> <li>• achievement targets</li> <li>• working conditions</li> <li>• site lighting arrangements</li> <li>• defects on equipment</li> <li>• hazards and potential hazards</li> <li>• coordination requirements</li> </ul>
<p><b>Safety information and procedures</b> may include:</p>	<ul style="list-style-type: none"> <li>• relevant legislation and regulations</li> <li>• relevant Australian standards</li> <li>• management plans</li> <li>• relevant OHS policy</li> <li>• relevant code of practice</li> <li>• manufacturer's instructions</li> <li>• safe working procedures</li> <li>• control and safety of travelling speed</li> <li>• selection and observance of safe working levels and angles</li> <li>• boarding and disembarking procedures</li> <li>• communications and signalling procedures</li> </ul>
<p><b>Prepare site</b> may include:</p>	<ul style="list-style-type: none"> <li>• hazard identification and control</li> <li>• identification of load</li> </ul>



	<ul style="list-style-type: none"> <li>• identification and selection of lifting equipment</li> <li>• inspection and certification of lifting equipment</li> <li>• management of permits and tags</li> </ul>
<b>Australian standards</b> may include:	<ul style="list-style-type: none"> <li>• AS2550 for cranes, hoists and winches</li> <li>• cranes and state based legislation and regulations</li> <li>• any relevant legislation</li> </ul>
<b>Hazards</b> may include:	<ul style="list-style-type: none"> <li>• environment</li> <li>• people</li> <li>• other equipment</li> <li>• dangerous materials</li> <li>• facilities</li> </ul>
<b>Signals</b> may include:	<ul style="list-style-type: none"> <li>• verbal</li> <li>• hand signals to Australian standards</li> <li>• whistles/hooters to Australian standards</li> <li>• two-way radio/telephones</li> <li>• light signals to Australian standards</li> </ul>
<b>Records</b> may include:	<ul style="list-style-type: none"> <li>• maintenance records</li> <li>• handover records</li> <li>• records of breaks</li> <li>• log books</li> </ul>

## Unit Sector(s)

Load Handling

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.