# Overhead Travelling Crane – Safe Operation



| Document no. | Work description |
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| SMS-06-SW-1151 | This SWI describes the safe work practices for using Overhead Travelling Cranes |
| | **Scope**<br>This SWI applies to the use of all Overhead Travelling Cranes at Maintenance Centres in RSD<br>This SWI does not relate to the work being carried out (i.e. bogie change). Refer to the relevant task SWI(s) for additional information |
| **Review date**<br>12/11/10 | **References**<br>• NSW OHS Regulation 2001<br>• AS2550 Cranes, hoists and winches<br>• AS1418.1 Cranes, hoists and winches (general requirements)<br>• AS2549-1996 Cranes (glossary of terms)<br>• SMS-06-GD-0403 Plant Risk Assessment<br>• SMS-16-FM-0089 Lifting Equipment Inspection<br>• SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out<br>• SMS-16-FM-0717 Overhead Travelling Crane Daily Pre-start-Daily Checklist<br>• SMS-05-SR-0027 Records management |

| Responsible supervisor | PPE and precautions | Competencies or qualifications | Licences or permits required |
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| Line Manager | • High visibility vest or clothing<br>• Safety Footwear<br>• Protective Gloves<br>• Safety Eyewear | • Site specific induction<br>• Competent in the fitting of lifting equipment to engineered lifting points<br>• Dogman certification, as required<br>• Certificate of Competency to operate a crane<br>• RISI<br>• Electrical Safety Awareness | |

**Tools and equipment required**

Slings, Chains and Lifting Frames

IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT.

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| **Periodic Inspections** | • Lifting gear will undergo periodic inspection in accordance with SMS-16-FM-0089 Lifting Equipment Inspection by a certified provider, at the following intervals<br>  • Chains – Quarterly<br>  • Slings – Quarterly<br>Equipment that is certified as fit for use is to display a prominent tag indicating its fitness<br>Each inspection is to be recorded in the relevant database (ELIPSE) and made available, as required<br>Reccurrence of the next inspection is to be scheduled and managed by local line management in accordance with SMS-05-SR-0027 Records Management |
|  | ***Warning***<br>• *To prevent equipment failure before using any type of lifting gear, always ensure that the lifting gear has had a visual inspection and has been certified as fit for use and is within its inspection date* |


**Fig.1 Typical Overhead Travelling Crane**



Prepared using SMS-06-TP-0317 v1.1; Custodian: Principal OHS Adviser; Approver: GM Safety Risk; Issue date: 08/08/07; Review date 08/08/10

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| **Pre-operational checks** | At the beginning of the shift or before the first lift of the day the crane and lifting gear are to be inspected using SMS-16-FM-0717 Overhead Travelling Crane Daily Pre-Start-Daily Checklist<br>The record of this inspection is to be provided to line management and retained in accordance with SMS-05-SR-0027 Records management<br>Also, prior to every lift, a visual inspection is to be carried out of the lifting gear<br>Any lifting gear found to be worn or damaged during any inspection is to have an "Out of Service" tag fitted in accordance with SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out<br>Such worn or damaged gear is not to be re-used, but must be given to the Line Manager for destruction/scrapping<br>Take note of the location of the location of the Crane Isolation Switch so it can be quickly activated in an emergency |  <br>**Fig. 2 Isolation Switch** |
| | ***Warning***<br>• *Never use lifting gear that appears to be faulty, damaged or out of its inspection date. Doing so could result in serious injury or death* | |
| **Identify lifting points** | Only personnel with a certificate of competency are to fit lifting gear and co-ordinate a lift<br>When provided Engineered lifting points are be used in accordance with dedicated SWIs<br>Where engineered lifting points and/or SWIs are not provided, only a Certified Dogman is authorised to fit lifting gear and co-ordinate a lift<br>Inspect lifting points before their use to ensure there are no signs of wear or damage | |
| | ***Warning***<br>• *Never use a lifting point that appears to be worn or damaged. Doing so could result in serious injury or death, should the lifting point fail*<br>• *Only those certified as competent are to operate cranes. Regardless of prior training, if you believe you are no longer competent to fit lifting gear or co-ordinate a lift, do not proceed. Contact your Line Manager and make alternative arrangements. Failure to correctly fit lifting gear or co-ordinate a lift could result in serious injury or death* | |
| **Identity the lift / travel path and remove obstacles** | Before undertaking any lift, ensure that there are no obstacles on the rails or in the intended travel path<br>Ensure that there are no electrical hazards (e.g. that there are no wires in the intended path of the load)<br>Ensure you consider the vertical, as well as the horizontal path<br>Ensure you consider load swing, load shift or other unintentional movement when determining a clear path<br>Ensure that the weight of the load is suitable for all equipment being used<br>Restrict access to the lift area. Where necessary, erect barricades, ensure any signage is visible and/or position an observer(s) at the entrance(s) to restrict the movement of plant and unauthorised personnel into the lifting area | |
| | ***Warning***<br>• *Obstacles in the intended path of the crane movement could be struck during the movement and could also obscure vision during the lift*<br>• *Failure to correctly plan the path of the lift and ensure it is free of obstacles could result in damage to equipment, serious injury or death. If you are unable to identify a safe path, do not lift*<br>• *Never lift over the top of people as this may result in serious injury or death* | |

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| **The lift** | In order to ensure the lifting equipment has been correctly fitted and to minimise the risk of unintended load movement, always undertake a 'test lift' by slowly lifting the load a small distance and observing its response before proceeding<br>Test the operation of the emergency stop<br>Once testing is complete lift and transport the load as low to the ground as possible<br>Keep all crane movements smooth<br>Always ensure the crane hook is centred over the load before lifting<br>Visual contact must be maintained between the person co-ordinating the lift and the person performing the lift. If this cannot be achieved, do not proceed with the lift. If at any time during the lift this visual contact is lost, immediately stop the lift<br>Only a qualified Dogman is permitted to turn over an item, even if lift points are fitted and SWIs provided |  <br>**Fig. 3 A Lifting Frame** |
| | ***Warning***<br>• *If at any time during the lift, either the person performing the lift or the person co-ordinating the lift notices wear, damage or other signs of abnormal operation, the lift is to cease. Have an "Out of Service" tag fitted in accordance with SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out and do not proceed again until the issue is investigated and rectified by an appropriately qualified person*<br>• *To prevent injury never leave a suspended load unattended, lift loads over the top of people or allow people to be lifted by the crane as this may result in serious injury or death* | |
| **Storage of lifting gear** | On completion of all lifts, move the crane to its parked position and stow the controller correctly<br>Check lifting gear after use, any lifting gear found to be worn or damaged during any inspection is to have an "Out of Service" tag fitted in accordance with SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out and be provided to line management for destroying<br>When not in use lifting gear is to be stowed in a manner so as to minimise the risk of wear or damage |  <br>**Fig. 4 Stowed Lifting Gear** |
| | ***Warning***<br>• *Never stow equipment that appears to be faulty, damaged or outside its inspection date Immediately tag it as 'Out of Service' and report it to the Line Manager for rectification* | |
| **Additional controls** | | |
| *Additional controls may be required, depending on the work being done (e.g. bogie change)* | | |