

Standard Operating Procedure

Load Slinging Procedures

Prepared for: Your Company
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Site:

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All rigging methods detailed in this SOP are in accordance with the Approved Code of Practice for Cranes (Department of Labour, 3rd edition) and the Approved Code of Practice for Load-lifting Rigging (WorkSafe New Zealand, December 2012), and relevant rigging and load-lifting requirements under New Zealand health and safety legislation.

Main Lifting Hazards & Controls

The following hazards apply generally to lifting and rigging operations covered by this SOP. All personnel involved in a lift must be familiar with these hazards and the controls required before any lift takes place.

Hazard	Control(s)
Suspended loads	Rig the load correctly; use taglines to control the load; stand clear of the load; nobody under the load at any time.
Moving plant and vehicles nearby	Spotters in place; exclusion zones established; signage displayed; toolbox talk held to alert and communicate with everyone that a lift is taking place.
Sharp edges on the load	Use packing and edge protection between the load and slings.
Lifting loads overhead	All parties clear the area to avoid collision; wear a hard hat and other required PPE.
Sling/rigging gear failure	Visually inspect all slings, shackles and rigging gear before use; remove damaged gear from service; use gear within its rated SWL.
Load instability or shifting during lift	Confirm load is balanced and centre of gravity understood before lifting; take up slack slowly and check load balance at a safe height before proceeding.
Dropped objects	Secure loose items on the load; establish exclusion zone below and around the lift path; no personnel to work or walk beneath a suspended load.
Poor communication between crew	Use a single, nominated signal person; confirm hand signals or radio channel before lifting; toolbox talk prior to the lift.
Manual handling of rigging gear	Use correct lifting technique; use mechanical aids where practical; team lift heavy gear.
Pinch points and crush injuries	Keep hands and fingers clear of pinch points when rigging; use taglines to guide the load rather than direct hand contact.

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Gantry Crane Operation

All operators must follow this procedure when operating the gantry crane.

- All operators must be supervised at all times by a competent person.
- All operators must ensure their suspended load will not affect any other work parties. Ensure all hazards are clear before lifting, including moving plant, vehicles, and people in the work area, and that these hazards are managed before lifting begins.
- Ensure a visual inspection and a function check on the crane is completed before use.
- Ensure the operator has reviewed the SOP relevant to the load being lifted, to correctly sling up and lift the load.

Gantry Crane Hazards & Controls

Hazard	Control(s)
Suspended loads	Nobody works or stands under a suspended load; use taglines to control the load; stand clear until the load is landed.
Swinging loads	Control the load with taglines; travel at a controlled speed; avoid sudden starts and stops that cause the load to swing.
Mobile plant in the area	Establish exclusion zones; use spotters; make positive contact with plant operators before lifting or travelling.
Other work parties nearby	Communicate the lift plan and timing before lifting; establish exclusion zones; hold a toolbox talk to alert all parties that a lift is taking place.
Faulty equipment or gear failure	Complete a visual inspection and function check of the crane before use; inspect all rigging gear; remove damaged or faulty equipment from service immediately.
Noise	Use hand signals or radio communication where verbal communication is difficult; wear hearing protection where required.
Blind lifts (load out of sight of the operator)	Use a dedicated, nominated signal person; do not proceed with the lift if the load or travel path cannot be safely monitored.
Poor communication	Agree hand signals or radio channel before lifting; use a single nominated signal person; stop the lift immediately if communication is lost.
Sharp edges on the load	Use packing and edge protection between the load and slings.
Wind	Monitor wind conditions before and during the lift; stop lifting if conditions affect safe control of the load.
Distractions	Remove non-essential personnel and distractions from the lift area; maintain full attention throughout the lifting operation.

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Load 1 — Pipe



Approved slinging configuration for this load type.

Load weight	1,500 kg
Rigging configuration	2-leg choke hitch configuration
Gear used	2x 3.0 tonne synthetic slings Timber dunnage (to load the pipe on) Rubber edge protection (to prevent slipping)
Equipment SWL (choked)	3.0t sling choked = 2,400 kg SWL per leg 2,400 kg x 2 legs = 4,800 kg combined SWL
Effect of lifting angle (90°)	Included angle of 90° increases the force on each sling leg to 1,065 kg
SWL exceeds load weight?	YES – confirmed safe to lift

Slinging Procedure

Step 1	Select appropriate lifting equipment and inspect for damage.
Step 2	Apply both 3 tonne synthetic slings to the load using a choke hitch configuration, ensuring they are evenly positioned the same distance in from the edges (1 metre).
Step 3	Install rubber edge protection.
Step 4	Attach tagline.
Step 5	Perform test lift.
Step 6	Lift and place load safely.
Step 7	Land load on dunnage, ensuring rigging equipment is not caught between the load and dunnage.
Step 8	Remove all equipment and stow away safely.

Do not walk or work under the suspended load at any stage of this procedure. Keep the exclusion zone clear until the load is safely landed and equipment removed. This rigging method complies with the Approved Code of Practice for Cranes and the Approved Code of Practice for Load-lifting Rigging.

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Load 2 — Transformer



Load weight	450 kg
Rigging configuration	2-leg lift
Gear used	2x 10mm chain slings Pallet (dunnage)
Equipment SWL	10mm chain sling = 3.2t SWL per leg Multi-leg at 60° sling angle = 5.5t combined SWL
Effect of lifting angle (60°)	Sling angle of 60° results in a force on each leg of 261 kg
SWL exceeds load weight?	YES – confirmed safe to lift

Approved slinging configuration for this load type.

Slinging Procedure

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|--------|---|
| Step 1 | Select appropriate lifting equipment and inspect for damage. |
| Step 2 | Connect chain hooks to lifting eyes on transformer, ensuring hook latches face outward. |
| Step 3 | Attach tagline if needed. |
| Step 4 | Perform test lift. |
| Step 5 | Lift and place load safely. |
| Step 6 | Remove lifting equipment and stow away. |

Do not walk or work under the suspended load at any stage of this procedure. Keep the exclusion zone clear until the load is safely landed and equipment removed. This rigging method complies with the Approved Code of Practice for Cranes and the Approved Code of Practice for Load-lifting Rigging.

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Worker Sign-Off

I confirm I have read, understood, and will follow this SOP when lifting this load type.

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