

Activity Hazards Analysis

Project Name:		AHA No TCL 26203	Date:	Scheduled:
Location:		Contractor:		Revised:
Required Personal Protective Equipment:			Analysis by:	Date:
Description Tower Crane CTL400		A/D Director: Controlling Entity: Site Supervisor: Lift Director: Crane User:	Reviewed by:	Date:
Work Operation: Tower Crane Assembly			Approved by:	Date:
Date	Execution Process	Potential Hazards	Preventive or Corrective Measures	Inspection Requirements
	<ol style="list-style-type: none"> 1. Mobilization and setup of assist crane. 2. Begin the delivery of tower sections. 	<p>Ground conditions for crane set up is proper compaction and there is room for setup, tractor-trailer access is appropriate for crane setup, struck by hazards, pinch points while setting counterweights and fitting luffing jib sections together, overexertion hazards while placing mats, slips and trips on trailer and crane decks, wind/weather restrictions, co-occupation of active worksite, work-zone intrusion, Maintenance of Public traffic and site traffic</p>	<p>Preplan crane set up area and visit site prior to setup day to verify, use taglines to avoid hand manipulation, use crane and jobsite equipment to limit manual exertion of mats and cribbing for crane, use ladders for trailer deck access, keep mud and dirt out of cleats of shoes and immediately clean up spills from refueling and preventative maintenance. Clear decks of equipment of snow, ice and mud, contractor to set-up barricades to keep non-essential personnel out of exclusion zone, Monitor the wind and adjust operations when wind prohibits operations.</p>	<p>Operator shall; Keep equipment clean and free of slip/trip hazards. Use equipment to move materials in lieu of manual handling. All personnel stay away from pinch points, rigging integrity, and suspended loads. Monitor wind and weather restrictions</p> <p>Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Ground conditions for assist crane to mobilize and setup as well and build out for crane attachments when necessary. Monitor wind and weather restrictions. Coordinate co-occupation work tasks to ensure other crafts are not in harms way or create hazardous conditions for the tower erection.</p>

Tower Crane Erection *Note this hazard analysis is only a guide of the sequence of steps and hazards and should not be used to replace the manufactures specifications and operator guidelines

<ol style="list-style-type: none"> 1. Unload trucks 2. Stack 2 double 22.6 towers @21260 LBs 3. Build turntable on ground install cab and platforms 4. Hook up power cord 	<p>Rigging failures, struck by load, pinch points, movement of equipment on site, under a suspended load, working from elevated work positions, assist crane hazards, ground conditions, and crane signal challenges, wind/weather restrictions.</p>	<p>Inspection of rigging prior to use for defects and proper capacity, ensure proper rigging practices and appropriate rigging protection, use of tag lines at all times when a greater safety hazard is not created, barricade and/or utilize road closures in area where crane erection is underway, ensure tractor-trailer access roads are of appropriate compaction and space for vehicle movement, ensure fall protection is used and inspected for all appropriate uses, ensure adequate space and ground conditions are prepared for assist crane, designation on ONE crane signal person for visual crane signals and radio signals are used when visual signal are limited., Monitor the wind and adjust operations when wind prohibits operations.</p>	<p>Crane erection supervisor shall ensure; Rigging inspection and practices/ Fall protection is inspected and used during all fall potentials 6’ and higher/ Erection plan is exactly followed and when deviations are required then job shall stop and new requirements effectively communicated with all personnel. Ensure working surfaces are kept free of slippery conditions and mud, ice, snow are removed.</p> <p>Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Ground conditions for assist crane to mobilize and setup as well and build out for crane attachments when necessary. Coordinate co-occupation work tasks to ensure other crafts are not in harms way or create hazardous conditions for the tower erection.</p>
<ol style="list-style-type: none"> 1. Stack turntable on tower @23250 Lbs. 2. Torque bolts on tower and turntable with high torque 	<p>Work at heights, pinch points, manual rigging and movement of materials, climbing on lattice works of jib, slips and trips, weather and wind restrictions, pulling wire rope cable.</p>	<p>Same as previously mentioned in addition to the following; Ground work will require the use of ladders for elevated work position and tie-off when working higher then 6’, careful consideration shall be given to tie off points that do not exceed rip and elongation distance requirements of 11.5 feet with personal fall protection, plywood or other suitable material will be placed under ladder feet when dirt conditions exist, work from platforms while assembly to turntable is taking place on tower top. Remove snow, mud and ice from working surfaces.</p>	<p>Crane erection supervisor shall ensure; Rigging inspection and practices/ Fall protection is inspected and used during all fall potentials 6’ and higher/ Erection plan is exactly followed and when deviations are required then job shall stop and new requirements effectively communicated with all personnel. Ensure working surfaces are kept free of slippery conditions and mud, ice, snow are removed.</p> <p>Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Coordinate co-occupation work tasks to ensure other crafts are not in harms way or create hazardous conditions for the tower erection.</p>
<ol style="list-style-type: none"> 1. Build tower top on ground as an assemble 2. Set on turntable 	<p>Work at heights, pinch points, manual rigging and movement of materials, climbing on lattice works of jib, slips and trips, weather and wind restrictions, pulling wire rope cable.</p>	<p>Same as previously mentioned in addition to the following; Ground work will require the use of ladders for elevated work position and tie-off when working higher than 6’, careful</p>	<p>Crane erection supervisor shall ensure; Rigging inspection and practices/ Fall protection is inspected and used during all fall potentials 6’ and higher/</p>

Tower Crane Erection *Note this hazard analysis is only a guide of the sequence of steps and hazards and should not be used to replace the manufactures specifications and operator guidelines

	@19650 Lbs.		consideration shall be given to tie off points that do not exceed rip and elongation distance requirements of 11.5 feet with personal fall protection, plywood or other suitable material will be placed under ladder feet when dirt conditions exist, work from platforms while assembly to turntable is taking place on tower top. Remove snow, mud and ice from working surfaces	Erection plan is exactly followed and when deviations are required then job shall stop and new requirements effectively communicated with all personnel. Ensure working surfaces are kept free of slippery conditions and mud, ice, snow are removed. Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Coordinate co-occupation work tasks to ensure other crafts are not in harm's way or create hazardous conditions for the tower erection.
	<ol style="list-style-type: none"> 1. Build counter deck assembly 2. Build counterweight basket and leverage arms as an assembly 3. Lift counter deck @29547 LBs and connect to counterweight basket assembly to make 1 unit 4. Pick counter deck and basket assembly together @ 34000Lbs. and connect to turntable 	Rigging failures, suspended loads, fall exposures when setting onto turntable, dropping tools and materials, pinch points, manual manipulation of section to fit adjustment, wind/weather restrictions, ground conditions for access road after numerous trucks have entered site already chewing it up, preassembly of attachments on ground, work from ladders, other hazards are common to same hazards previously mentioned, wind restrictions, slip and trip hazard due to grease on turntable	Same as previously mentioned in addition to the following; Rigging should be visually inspected prior to each lift, personnel shall be warned to evacuate area under suspended load, all tools and materials shall be tethered to prevent dropping, tools, pry-bars and alike to shall be used to manipulated load to fit, wind and weather shall be monitored and work stopped when adverse conditions exist.	Crane erection supervisor shall ensure; Rigging inspection and practices/ Fall protection is inspected and used during all fall potentials 6' and higher/ Erection plan is exactly followed and when deviations are required then job shall stop and new requirements effectively communicated with all personnel. Ensure working surfaces are kept free of slippery conditions and mud, ice, snow are removed. Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Coordinate co-occupation work tasks to ensure other crafts are not in harms way or create hazardous conditions for the tower erection.

	<ol style="list-style-type: none"> Hook up power to hoist unit and luffer unit reeve luffer bridal 	<p>Work at heights, pinch points, manual rigging and movement of materials, climbing on lattice works of jib, slips and trips, weather and wind restrictions, pulling wire rope cable. Electrical hazard</p>	<p>Same as previously mentioned in addition to the following; All work requiring erection crew to access jib lattice works shall ensure they adhere to 100% fall prevention and protection techniques, remove snow or ice from shoes and/or equipment prior to working, monitor the wind/weather conditions as needed. Ensure proper lock out/tag out procedures are followed and power de-energized before hoist is connected to power.</p>	<p>Crane erection supervisor shall ensure; Rigging inspection and practices/ Fall protection is inspected and used during all fall potentials 6’ and higher/ Erection plan is exactly followed and when deviations are required then job shall stop and new requirements effectively communicated with all personnel. Ensure working surfaces are kept free of slippery conditions and mud, ice, snow are removed. Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Coordinate co-occupation work tasks to ensure other crafts are not in harms way or create hazardous conditions for the tower erection.</p>
	<ol style="list-style-type: none"> Assemble jib on the ground Install pendant bars And pre reeve on ground Hook up the hoist block Lift jib assembly and connect to upper @21000 Lbs. Connect bridal to pendant bars Connect leverage arm to jib assembly Install counterweights 	<p>Work at heights, pinch points, manual rigging and movement of materials, slips and trips, weather and wind restrictions.</p>	<p>Same as previously mentioned in addition to the following; All work requiring erection crew to access jib lattice works shall ensure they adhere to 100% fall prevention and protection techniques, remove snow or ice from shoes and/or equipment prior to working, monitor the wind/weather conditions as needed.</p>	<p>Crane erection supervisor shall ensure; Rigging inspection and practices/ Fall protection is inspected and used during all fall potentials 6’ and higher/ Erection plan is exactly followed and when deviations are required then job shall stop and new requirements effectively communicated with all personnel. Ensure working surfaces are kept free of slippery conditions and mud, ice, snow are removed. Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Coordinate co-occupation work tasks to ensure other crafts are not in harms way or create hazardous conditions for the tower erection.</p>
	<ol style="list-style-type: none"> Demobilization of assist crane 	<p>Ground conditions for crane demobilization is proper compaction and there is room for setup, tractor-trailer access is appropriate for crane setup, co-occupation of area by other crafts, struck by hazards, pinch points while setting counterweights, overexertion hazards while removing mats, slips and trips on trailer and crane decks, wind/weather restrictions.</p>	<p>Keep area housekeeping and materials out of area, keep fingers out of pinch point areas use taglines and pry bars to manipulate materials. Control work zone and demobilization area.</p>	<p>Crane erection supervisor shall ensure; Rigging inspection and practices/ Ensure working surfaces are kept free of slippery conditions and mud, ice, snow are removed. Site supervision shall ensure; Access roads for loads are appropriately compacted and have adequate space to move equipment. Coordinate co-occupation work tasks so other crafts aren’t in harms way</p>

Additional Comments (include any additional observations or comments on this job task below)

All personnel shall review the job safety analysis prior to work activity and sign below. Perimeter of work area shall have yellow caution or red warning tape installed to prevent any unnecessary jobsite personnel being exposed to these hazards.

PRINT	SIGNATURE

Assembly/Disassembly Director:

Date:

SAMPLE