

ACTIVITY HAZARD ANALYSIS



Date Prepared: 03/18/2020

AHA No.: 2020-03-18_001

Project Name: Motor Replacement - Conveyor 3

Activity/Work Task: Motor Replacement - Conveyor

Dept. / Div. / Section: Maintenance

Activity Location(s): Fullerton Plant, San Diego

Prepared By: Katherine Winsor

Task Start Date: 04/30/2020

Task Duration: Approximately four hours

Task Supervisor: John Schulz

Reviewed By: Sam Creamer

Overall Risk Assessment Code (RAC): M

<i>Risk Assessment Code Matrix</i>						
E=Extremely High Risk H=High Risk M=Moderate Risk L=Low Risk	Probability					
	Frequent	Likely	Occasional	Seldom	Unlikely	
S	Catastrophic	E	E	H	H	M
e	Critical	E	H	H	M	L
v	Marginal	H	M	M	L	L
e	Negligible	M	L	L	L	L
r						
i						
t						
y						

Job Steps	Hazards	Actions to Eliminate or Minimize Hazards	RAC
1. Tailgate Safety Meeting	<ul style="list-style-type: none"> - Accidental startup of equipment - Elevated work platform or stairs - Grated decks - Wires, cables, hoses 	<ol style="list-style-type: none"> 1. Roll call; assess fitness-to-work; 2. Identify lines of communication; 3. Discuss possible hazards and needed responses. 4. Conduct site walk-around; 5. Cordon off work areas with barricades and hazard tape. 	L



<p>2. De-energize motor and set work platform over conveyor.</p>	<ul style="list-style-type: none"> - Electrical equipment (transformers, switching gear, breakers, high voltage lines) - Ladders (portable, fixed) - Lifting equipment (forklifts, hoists) 	<ol style="list-style-type: none"> 1. Follow LOTO procedure for conveyor motor to safely de-energize motor. 2. Use hoist to lift and pry bar to position work platforms. 3. Confirm motor is de-energized before proceeding. 	<p>M</p>
			
<p>3. Mobilize equipment into place and set up to begin work</p>	<ul style="list-style-type: none"> - Hand tools 	<ol style="list-style-type: none"> 1. Conduct pre-use equipment inspections prior to starting work. 2. Ensure equipment is clean and tools are in good working condition. 3. Place mats underneath conveyor as needed to protect surface from motor oil spills. 4. Inspect and don proper PPE. Erect awning over work area to provide shade. 	<p>M</p>
			

<p>4. Move replacement motor into place</p>	<ul style="list-style-type: none"> - Hand tools - Lifting equipment (forklifts, hoists) - Manufacturing equipment and motion of machinery - Rolling or pinching objects - Wires, cables, hoses 	<ol style="list-style-type: none"> 1. Clear area maintenance shop to allow motor removal. 2. Rig and lift motor. 3. Transport to conveyor, secure load when transporting, use flagman to warn traffic while in transit. 4. Set motor on solid safe-work area. 5. Use proper ergonomics and avoid awkward positions when rigging and de-rigging motor. 6. Watch for uneven surfaces. 	L
			
<p>5. Disconnect motor and drive chains</p>	<ul style="list-style-type: none"> - Hand tools - Ladders (portable, fixed) - Rolling or pinching objects - Wires, cables, hoses 	<ol style="list-style-type: none"> 1. Insert work platform guards. 2. Set hand tools out. 3. Remove cable terminations for motor. 4. Remove drive chains. 5. Unbolt the motor from its base and side fasteners. 6. Use proper ergonomics when disconnecting motor. 	M
<p>6. Hoist motor off conveyor platform and replace with refurbished motor.</p>	<ul style="list-style-type: none"> - Elevated work platform or stairs - Hand tools - Heavy manual lifting/moving - Ladders (portable, fixed) - Lifting equipment (forklifts, hoists) - Rolling or pinching objects 	<ol style="list-style-type: none"> 1. Use proper lifting and rigging techniques to lift and switch motors. 2. Place motor on solid, safe-work area. 3. Rig and lift refurbished motor. 4. Set refurbished motor on base and set in place until guard clicks. 5. Use proper ergonomics when replacing motor - avoid awkward positions, use proper lifting techniques. 6. Keep tools in proper area on work platform. Be aware of your positioning on the platform. 	M

7. Tighten and reconnect motor.	<ul style="list-style-type: none"> - Elevated work platform or stairs - Hand tools - Ladders (portable, fixed) - Rolling or pinching objects - Wires, cables, hoses 	<ol style="list-style-type: none"> 1. Replace chain drive, tighten bolts and check, reconnect motor. 2. Use proper ergonomics when replacing chain drive, avoid awkward positions, keep tools in proper area on work platform. 3. Be aware of your positioning on the platform. 	L
8. Remove work platform and re-energize motor	<ul style="list-style-type: none"> - Accidental startup of equipment - Electrical equipment (transformers, switching gear, breakers, high voltage lines) - Heavy manual lifting/moving 	<ol style="list-style-type: none"> 1. Follow proper rigging and lifting procedures while removing work platform. 2. Police conveyor and motor to make sure no tools were left. 3. Follow motor LOTO to re-energize and ensure unit is in operating mode. 4. Notify plant supervisor of machine status and complete field log for task. 	L

Equipment	Inspection	Training
Crane (mobile)	Routine Service Inspection and Maintenance every 12 months.	Apprentice Certification or License Competent person
Lift	Routine Service Inspection and Maintenance every 12 months.	Apprentice Certification or License Competent person

Involved Personnel: Maintenance Crew Team B