

# Job Hazard Analysis

JHA Name: Overhead Cranes/Hoists & Slings



Assessment Date: 10-14-13

Revision Date: 05-10-17

Building or Location: North Mankato Campus

Department or Program: Ag Mechanics

Description of Individual Tasks or Assignments: Lifting, Lowering, Maneuvering Materials/Supplies within Facilities.

Tools, Equipment, or Machinery Used when Performing Task: Overhead Cranes/Hoists, Slings (e.g., alloy steel chain, nylon straps, metal mesh, hooks, clamps, fasteners, shackles, etc.)

Hazard Type(s) Associated with Task or Assignment:		Check for Exposure:	Specific Hazard Exposure:	Check if Exposure Recommends or Requires a Style of PPE?
1	<b>Impact</b> <u>Example:</u> Person(s) can strike an object, or be struck by a moving or flying/falling object (e.g., fragments, chips, particles, sand, dirt/debris).	X	Potential exposure to be struck by swinging loads, dropped loads, or caught between an elevated load and fixed object	X
2	<b>Penetration or Cut</b> <u>Example:</u> Person(s) can strike an object, be struck by an object, or fall upon an object or tool that would cut or otherwise break the skin.	X	Potential exposure to cuts and abrasions when handling metal pieces with rough or sharp edges (e.g., hand and finger injuries)	X
3	<b>Crush or Pinch</b> <u>Example:</u> An object(s) or equipment/machine may crush or pinch a body or body part	X	Potential exposure to be struck by swinging loads, dropped loads, or caught between an elevated load and fixed object	X
4	<b>Chemical or Harmful Dust</b> <u>Example:</u> Exposure to chemicals (i.e., hazardous substances and harmful physical agents), infectious agents from spills, splashing, physical contact, and/or exposure to dusts, vapors, fumes, or gases that could cause illness, irritation, burns, asphyxiation, breathing/vision difficulty, sensitization, infection, or other toxic health effects (i.e., acute or chronic). Note: "May also have or create ignition potential."			
5	<b>Heat</b> <u>Example:</u> Exposure to radiant heat sources, sparks, and splashes or spills of hot material			
6	<b>Light (optical) Radiation</b> <u>Example:</u> Exposure to strong light sources, glare, or intense light exposure which is a byproduct or a process. Note: "This category may also include hazards presented from lack of light (e.g., working in dark spaces/areas)."			
7	<b>Electrical Contact</b> <u>Example:</u> Exposure, contact, or proximity to live or potentially live electrical objects.			
8	<b>Ergonomic/ Human Factors</b> <u>Example:</u> Working in cramped spaces, repetitive movements, awkward postures, vibration, heavy lifting, etc. Note: "This category may also include unique hazards presented from tasks that require demanding or challenging degrees of mental and/or physical effort to be exerted by an individual. See <i>Physical Effort Definition/Examples</i> category for further explanation of physical effort."			
9	<b>Environmental</b> <u>Example:</u> Exposure to noisy environments, hot or cold work environments, poor weather conditions, working at a height, and any other conditions in the workplace that could cause danger, discomfort, and/or negative health effects.			

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**Personal Protective Equipment Requirements:**

<b>Eyes &amp; Face:</b>	
<b>Head &amp; Ears:</b>	Hard Hats (Required when falling materials or other overhead hazards could impact operator's head, and whenever work is performed over personnel)
<b>Whole Body:</b>	
<b>Feet:</b>	Safety Shoes (Required when operating Overhead Cranes/Hoists)
<b>Hands:</b>	Leather Gloves (Required when handling metal pieces with rough or sharp edges)
<b>Respiratory:</b>	
<b>Other:</b>	

**Other Control Measures or Requirements (Engineering & Administrative Controls):**

**#1) Impact Hazards, & #3) Crush or Pinch Hazards:** Crane/Hoist operators are responsible for the equipment, the load, and all personnel working around them. Operators are responsible for ensuring all loads are appropriately stacked, balanced, and do not exceed the capacity of the crane/hoist. Never exceed the rated capacity of the crane, hoist, slings, or other components, and only appropriately certified lifting slings (e.g., alloy steel chains, nylon straps, metal mesh, hooks, clamps, fasteners, shackles, etc.) and lifting devices may be used for overhead lifting. Ensure that slings, load chains & other lifting devices are fully & securely seated in hoist hook before lifting a load. When picking up a load slowly move the hoist into engagement with the load to eliminate wire rope slack in the hoist. Slowly remove slack from the slings when lifting. Crane/Hoist movement should be smooth and deliberate. Avoid jogging controls, which can inadvertently “shock” the load and hoist and cause equipment failure or load swing. Raise loads only to the height necessary to clear obstructions before moving the bridge or trolley. Never raise/move a load over personnel or place any part of your body underneath it. When possible, maintain a minimum clearance of 12” around load sides. Do not lift, lower, or transport a load with the crane or hoist until all personnel are clear of the load and the load’s path (Personnel should be warned of travel). Never leave the controls unattended with a load elevated. If it is necessary to leave controls, lower the load to the floor. “Note: If loss of electrical power, place controls in “OFF” position to prevent unexpected startup upon restoration of power.” **Miscellaneous Considerations:** Prior to operating cranes/hoists personnel must be trained by an authorized college trainer. Crane/Hoist operators must receive retraining every 3 years at minimum, or when conditions/equipment change, or findings indicated previous training is ineffective. Personnel are never permitted to ride the hook or load. Never use the upper limit switch as a guide on reaching the hoist’s maximum operating height. Never lower the hoist beyond a point where there are less than two wraps of wire rope on the drum. Hoist controls must remain labeled and legible with all warning labels appropriately attached. Do not use a hoist’s chain or wire rope as a lifting sling. Never pull or guide a hoist by the pendant power cable. Operators of tools, equipment, and machinery should read and follow all Manufacturers' recommendations/requirements (e.g., inspections, servicing/maintenance, safe usage, etc.). Any tools, equipment, or machinery found damaged, defective, or otherwise unsafe should immediately be removed from service and not used until repaired or replaced. Personnel should always consult their Supervisors on the selection and use of PPE for the tasks being performed.

**Physical Effort Definition/Examples**

**1.) Physical Mobility-** Movement from place to place on the job, considering distance and speed **2.) Physical Agility-** ability to maneuver body while in place or in static position **3.) Physical Strength (Light to Moderate)-** Ability to handle routine office materials and tools **4.) Physical Strength (Moderate to Heavy)-** Ability to handle 50lbs+ objects, considering frequency **5.) Dexterity-** skill and ability in using hands, fingers, and feet **6.) Physical Balance-** ability to maintain balance and physical control **7.) Coordination-** harmonious functioning of body parts (e.g., eye/hand, hand/foot, etc.) **8.) Endurance-** ability to sustain a prolonged stressful effort or activity with limited opportunity to rest

Note: "This JHA provides only the minimum PPE/safety requirements necessary to safely complete the task or assignment, and the JHA only covers the hazards or exposures that are most likely to be encountered. Nothing within this JHA bars or restricts personnel from requesting higher degrees of PPE or control to mitigate workplace hazards. In addition, South Central College personnel (e.g., employees and students) are required to complete any applicable safety or on-the-job trainings required prior to performing their positions or participating in their programs of study. Finally, South Central College personnel should consult their supervisors/instructors, the college’s written safety programs/policies, and/or the Security & Safety Director whenever they have questions or concerns."

**Certification: This document certifies a hazard assessment was conducted meeting the provisions specified under 29 CFR 1910.132 (d) and South Central College's related safety programs and policies.**

Name: Al Kluever  
Date: 05-10-17