

6951 Westminster Highway, Richmond, BC
Mailing Address: PO Box 5350, Vancouver BC, V6B 5L5
Telephone 604 276-3100 Toll Free 1-888-621-7233 Fax 604 276-3247

The *Workers Compensation Act* requires that the employer must post a copy of this report in a conspicuous place at or near the workplace inspected for at least seven days, or until compliance has been achieved, whichever is the longer period. A copy of this report must also be given to the joint committee or worker health and safety representative, as applicable.

Inspection Report #201615764061A

Employer Name	Jobsite Inspected	Scope of Inspection
THE UNIVERSITY OF BRITISH COLUMBIA	1137 Alumni Avenue Kelowna BC V1V 1V7	Engineering machine shop

Date of Initiating Inspection	Date of This Inspection	Delivery Date of This Report	Delivery Method
Jul 13, 2016	Jul 13, 2016	Jul 13, 2016	Email

THERE ARE ZERO (0) ORDERS OR OTHER ITEMS OUTSTANDING

**ACTION MAY STILL BE NECESSARY TO ENSURE COMPLIANCE
PLEASE READ FULL REPORT**

INSPECTION NOTES

The University of British Columbia - Okanagan (UBCO) Campus - School of Engineering is updating their policies and procedures for students that operated equipment and machines in the engineering machine shop.

UBCO invited WorkSafeBC to the engineering machine shop to help evaluate safeguarding of the equipment.

The following topics were discussed:

LOCKOUT

"lockout" means the use of a lock or locks to render machinery or equipment inoperable or to isolate an energy source in accordance with a written procedure;

"maintenance" means work performed to keep machinery or equipment in a safe operating condition, including installing, repairing, cleaning, lubricating and the clearing of obstructions to the normal flow of material;

"personal lock" means a lock provided by the employer for use by a worker to ensure personal lockout protection such that each lock when applied is operable only by a key in the worker's possession, and by a key under the control of the supervisor or manager in charge.

If the unexpected energization or startup of machinery or equipment could cause an injury, the energy source must be isolated and effectively controlled. If machinery is shut down for maintenance, such as installing a drill bit in a drill press, no work may be done until all parts and attachments have been secured against inadvertent movement and the energy isolating device has been locked out.

Written lockout procedures must be made available to each worker who are required to work on the machinery or equipment. Written lockout procedures must include provisions for verifying lockout.

Locks are not required if a tool, machine or piece of equipment which receives power through a readily disconnected supply, such as an electrical cord or quick release air or hydraulic line, is disconnected from its power supply and its connection point is kept under the immediate control of the worker at all times while work is being done.

SAFEGUARDING

An employer must ensure that machinery and equipment is fitted with adequate safeguards which

- (a) protect a worker from contact with hazardous power transmission parts,
- (b) ensure that a worker cannot access a hazardous point of operation, and
- (c) safely contain any material ejected by the work process which could be hazardous to a worker.

ROTATING HAZARDS

Rotating parts, such as friction drives, shafts, couplings and collars, set screws and bolts, keys and keyways, and projecting shaft ends, exposed to contact by workers must be guarded.

POWER PRESSES, BRAKE PRESSES AND SHEARS

Point of operation safeguarding, and the design, construction and reliability of operating controls of a power press, brake press, ironworker or shear must meet the requirements of the following applicable standard:

- (a) CSA Standard CAN/CSA-Z142-M90, Code for Punch Press and Brake Press Operation: Health, Safety, and Guarding Requirements;
- (b) ANSI Standard B11.4-1993, American National Standard for Machine Tools — Shears — Safety Requirements for Construction, Care, and Use;

(c) ANSI Standard B11.5-1988 (R1994), American National Standard for Machine Tools — Ironworkers — Safety Requirements for Construction, Care, and Use.

LATHE CHUCKS AND STOCK PROJECTION

Dogs that extend beyond the circumference of a lathe chuck must be safeguarded from contact by the operator.

STOCK PROJECTION

Safeguards must be provided to prevent a worker from contacting stock projecting from a machine tool.

MARKING OF PHYSICAL HAZARDS

A physical hazard must be marked in a manner that clearly identifies the hazard to the affected workers.

Note: The following standards provide guidance for the effective identification of hazards:

- (a) CSA Standard CAN/CSA-Z321-96, Signs and Symbols for the Workplace;
- (b) ANSI Standard Z535.1-1991, Safety Color Code;
- (c) ANSI Standard Z535.2-1991, Environmental and Facility Safety Signs;
- (d) ISO Standard 3864:1984, Safety Colours and Safety Signs.

FOLLOW MANUFACTURER'S INSTRUCTIONS OR SAFE WORK PROCEDURES

The employer must ensure that each tool, machine and piece of equipment in the workplace is

- (a) capable of safely performing the functions for which it is used, and
- (b) selected, used and operated in accordance with
 - (i) the manufacturer's instructions, if available,
 - (ii) safe work practices

WORKPLACE INSPECTIONS

Every employer must ensure that regular inspections are made of all workplaces, including buildings, structures, grounds, excavations, tools, equipment, machinery and work methods and practices, at intervals that will prevent the development of unsafe working conditions.

REFERENCES

In addition to any orders, or other items, and the information provided in the Inspection Notes section in this Inspection Report, the officer may discuss other health and safety issues with the employer arising out of the inspection. The information below sets out the health and safety requirements discussed with the employer, and unless otherwise noted, violations of these requirements were not observed.

Reference	Details Discussed
<p>OHS10.2</p> <p>If the unexpected energization or startup of machinery or equipment or the unexpected release of an energy source could cause injury, the energy source must be isolated and effectively controlled.</p>	Discussed with employer and worker representatives.
<p>OHS10.3(1)(a)</p> <p>If machinery or equipment is shut down for maintenance, no work may be done until all parts and attachments have been secured against inadvertent movement.</p>	Discussed with employer and worker representatives.
<p>OHS10.3(1)(c)</p> <p>If machinery or equipment is shut down for maintenance, no work may be done until the energy isolating devices have been locked out as required by this part.</p>	Discussed with employer and worker representatives.
<p>OHS10.4(1)</p> <p>When lockout of energy isolating devices is required, the devices must be secured in the safe position using locks in accordance with procedures that are made available to all workers who are required to work on the machinery or equipment.</p>	Discussed with employer and worker representatives.
<p>OHS10.6(2)</p> <p>Before commencing work, a worker must verify that all energy sources have been effectively locked out.</p>	Discussed with employer and worker representatives.
<p>OHS10.11</p> <p>The application of a lock is not required under section 10.3 or 10.10 if:</p> <ul style="list-style-type: none"> (a) the energy isolating device is under the exclusive and immediate control of the worker at all times while working on the machinery or equipment, or (b) a tool, machine or piece of equipment which receives power through a readily disconnected supply, such as an electrical cord or quick release air or hydraulic line, is disconnected from its power supply and its connection point is kept under the immediate control of the worker at all times while work is being done. 	Discussed with employer and worker representatives.

6951 Westminster Highway, Richmond, BC
 Mailing Address: PO Box 5350, Vancouver BC, V6B 5L5
 Telephone 604 276-3100 Toll Free 1-888-621-7233 Fax 604 276-3247

Reference	Details Discussed
<p>OHS12.2</p> <p>Unless elsewhere provided for in this Occupational Health and Safety Regulation, the employer must ensure that machinery and equipment is fitted with adequate safeguards which</p> <ul style="list-style-type: none"> (a) protect a worker from contact with hazardous power transmission parts, (b) ensure that a worker cannot access a hazardous point of operation, and (c) safely contain any material ejected by the work process which could be hazardous to a worker. 	<p>Discussed with employer and worker representatives.</p>
<p>OHS12.16</p> <p>Rotating parts, such as friction drives, shafts, couplings and collars, set screws and bolts, keys and keyways, and projecting shaft ends, exposed to contact by workers must be guarded.</p>	<p>Discussed with employer and worker representatives.</p>
<p>OHS12.29</p> <p>Point of operation safeguarding, and the design, construction and reliability of operating controls of a power press, brake press, ironworker or shear must meet the requirements of the following applicable standard:</p> <ul style="list-style-type: none"> (a) CSA Standard CAN/CSA-Z142-M90, Code for Punch Press and Brake Press Operation: Health, Safety, and Guarding Requirements; (b) ANSI Standard b11.4-1993, American National Standard for Machine Tools - Shears - Safety Requirements for Construction, Care, and Use; (c) ANSI Standard B11.5-1988(R1994), American National Standard for Machine Tools - Ironworkers - Safety Requirements for Construction, Care, and Use. 	<p>Discussed with employer and worker representatives.</p>
<p>OHS12.38</p> <p>Dogs that extend beyond the circumference of a lathe chuck must be safeguarded from contact by the operator.</p>	<p>Discussed with employer and worker representative.</p>
<p>OHS12.40</p> <p>Safeguards must be provided to prevent a worker from contacting stock projecting from a machine tool.</p>	<p>Discussed with employer and worker representative.</p>

Reference	Details Discussed
<p>OHS12.13</p> <p>A physical hazard must be marked in a manner that clearly identifies the hazard to the affected workers.</p> <p>Note: The following standards provide guidance for the effective identification of hazards:</p> <p>(a) CSA Standard CAN/CSA-Z321-96, Signs and Symbols for the Workplace; (b) ANSI Standard Z535.1-1991, Safety Color Code; (c) ANSI Standard Z535.2-1991, Environmental and Facility Safety Signs; (d) ISO Standard 3864:1984, Safety Colours and Safety Signs.</p>	Discussed with employer and worker representatives.
<p>OHS4.3(1)(b)(i)</p> <p>The employer must ensure that each tool, machine and piece of equipment in the workplace is capable of safely performing the functions for which it is used and is selected, used and operated in accordance with the manufacturer's instructions, if available.</p>	Discussed with employer and worker representatives.
<p>OHS4.3(1)(b)(ii)</p> <p>The employer must ensure that each tool, machine and piece of equipment in the workplace is capable of safely performing the functions for which it is used and is selected, used and operated in accordance with safe work practices.</p>	Discussed with employer and worker representatives.
<p>OHS3.5</p> <p>Every employer must ensure that regular inspections are made of all workplaces, including buildings, structures, grounds, excavations, tools, equipment, machinery and work methods and practices, at intervals that will prevent the development of unsafe working conditions.</p>	Discussed with employer and worker representatives.

Employer #	Mailing Address	Classification Unit #	Operating Location
11284	C/O WCB CLAIMS ADMINISTRATOR HUMAN RESOURCES 6TH FLOOR 6190 AGRONOMY RD VANCOUVER BC V6T 1Z3	765010	214

Lab Samples Taken	Direct Readings	Results Presented	Sampling Inspection(s)
N	N	N	

Workers onsite during Inspection	Notice of Project Number
3	

Inspection Report Delivered To	Employer Representative Present During Inspection	Worker Representative Present During Inspection	Labour Organization & Local
Marc Nadeau	Marc Nadeau	Durwin Bossy	

WorkSafeBC Officer Conducting Inspection
Daniel Marcoux

*Inspection Time	*Travel Time
4.00 hrs	1.00 hrs

*The time recorded above reflects the inspection time and travel time associated with this inspection report and includes time spent on pre and post-inspection activities. Additional time may be added for subsequent activity.

Right to Review

Any employer, worker, owner, supplier, union, or a member of a deceased worker's family directly affected may, within 45 calendar days of the delivery date of this report, in writing, request the Review Division of WorkSafeBC to conduct a review of an order, or the non-issuance of an order, by contacting the Review Division. Employers requiring assistance may contact the Employers' Advisers at 1-800-925-2233.

WorkSafeBC values your feedback. To obtain that feedback, an external market research provider may be contacting you to complete a survey.