Hoists, Rigging and Lifting Devices

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Vice-President,
Finance and Administration

Applicable Legislation

Relevant Guidelines
O. Reg. 231/91, Regulations for Construction Projects, Sections 150-180.


Intent: To outline safety policy regarding the use and maintenance of hoists and rigging and lifting devices for materials handling.

Definition:

boom the projecting part of a backhoe, shovel, crane or similar lifting device from which a load is likely to be supported;

hoists and rigging electric-powered equipment used to raise or lower material or objects or lower material or objects and includes hardware, hooks, ropes, slings, rails and other components.

lifting device a device that is used to raise or lower any material or object and includes its rails and other supports but does not include a device to which the Elevating Devices Act applies;

mass quantity of matter; the British unit of mass is the pound (lb) and the metric unit is the gram (g);

qualified inspector a representative from the manufacturer, or a professional from a service or organization who is competent to inspect hoists and rigging;

weight the gravitational force by which a body is attracted toward the earth.
Requirements of O. Reg. 851 for Industrial Establishments, Sections 45, 51

45.(a) Material, articles or things required to be lifted, carried or moved, shall be lifted, carried or moved in such a way and with such precautions and safeguards, including protective clothing, guards or other precautions as will ensure that the lifting, carrying or moving of the material, articles or things does not endanger the safety of any worker.

51.(1) A lifting device shall,

(a) be so constructed, of such strength and be equipped with suitable ropes, chains, slings and other fittings so as to adequately ensure the safety of all workers;

(b) be thoroughly examined by a competent person to determine its capability of handling the maximum load as rated,

(i) prior to being used for the first time, and

(ii) thereafter as often as necessary but not less frequently than recommended by the manufacturers and in any case, at least once a year, and a permanent record shall be kept, signed by a competent person doing the examination;

(c) be plainly marked with sufficient information so as to enable the operator of the device to determine the maximum rated load that the device is capable of lifting under any operating conditions;

(d) have a cab, screen, canopy guard or other adequate protection for the operator where the operator may be exposed to the hazard of falling material;

(e) when it is a pneumatic or hydraulic hoist, have controls that automatically return to their neutral position when released.

51.(2) A lifting device shall be operated,

(a) only by,

(i) a competent person, or

(ii) a worker being instructed who is accompanied by a competent person; and
(b) in such a way that,

(i) no part of the load passes over any worker,

(ii) where a worker may be endangered by the rotation or uncontrolled motion of a load, one or more guide ropes is used to prevent rotation or other uncontrolled motion, and

(iii) when its load is in a raised position the controls are attended by an operator.

51.(4) Hoisting controls operated from other than a cab or cage shall,

(a) be located so that they can be operated at a safe distance from a load being lifted; and

(b) automatically return to their neutral position when released.

Requirements of O. Reg. 213/91, Regulations for Construction Projects

151.(1) No crane or similar hoisting device shall be subjected to a load greater than its rated load-carrying capacity.

173.(1) Every hoisting hook shall be equipped with a safety catch.

173.(3) A hoisting hook shall have its load rating legibly cast or stamped on it in a location where the person using the hook can readily see it.

173.(4) A hoisting hook shall not be used if it is cracked, has a throat opening that is greater than as manufactured or is twisted from the plan of the unbent hook.

176. Only an alloy steel chain or a chain manufactured for the purpose shall be used for hoisting.

177.(1) No alloy chain shall be annealed or welded.

Policy:

1. Hoists and fixed lifting devices shall be registered with the Environmental Health and Safety and Physical Resources in order that preventative maintenance and annual safety inspection programs may be co-ordinated.
2. Hoist operators shall be trained and qualified to the standard of the Construction Safety Association or equivalent. Workplace supervisors shall maintain appropriate records.

3. Preventative maintenance and safety inspection programs for hoists and rigging and lifting devices shall be based on the recommendations of the Canadian Standards Association and on those of the manufacturer.

4. Hoists and rigging and fixed lifting devices shall be inspected by a qualified person. A permanent record of each inspection shall be kept by the workplace supervisor in a place readily accessible to the workers. Physical Resources shall be provided copies of the inspection reports. Deficiencies shall be reported to Environmental Health and Safety.

5. Hoists and rigging and fixed lifting devices shall be inspected by a qualified person before being placed into service.

6. Load chains, wire ropes, slings and other accessories for hoists and lifting devices shall be inspected annually by a qualified inspector. Inspection records shall be maintained in the workplace, and items shall be tagged indicating “safe for use.”

7. Operators of hoists and fixed lifting devices shall wear CSA-approved head protection and foot protection, and other protective equipment appropriate for the job.

8. Elevating dock plates shall be inspected annually by a qualified inspector. Inspection records shall be maintained in the workplace. (Contact Physical Resources for guidance.)

Guidelines:

Hoist and rigging accidents are prevented when personnel follow established procedures for safe lifting. The most important safety precaution is to determine load mass before attempting any lift. Specific hazards associated with hoisting include:

< equipment limitations and attempting to exceed the safe working load for the hoist and tackle;

< use of worn or defective lifting equipment;

< contact of the hoisting device, tackle, or load with electrical distribution lines;

< poor environmental conditions.
Hoist accidents will be prevented and material handling safety will be promoted when operators are informed about the fundamentals of safe rigging and lifting and learn to properly use the hoisting equipment in the workplace. Contact Environmental Health and Safety about training opportunities for employees required to use lifting devices.

For related information, see the following safety policies:

- **851.07.06** Powered Lift Truck Safety Programs
- **851.06.08** Manual Material Handling;
- **851.05.05** Head Protection;
- **851.05.02** Foot Protection;
- **851.13.10** Back Care.

Contact Physical Resources for details about the preventative maintenance and inspection programs for hoists and fixed lifting devices.

The Construction Health and Safety Manual published by the Construction Safety Association provides essential information about rigging and hoisting safety.

Further information about hoisting and rigging may be found at the web site: [http://tis.eh.doe.gov/techstds/standard/std1090/1090.html](http://tis.eh.doe.gov/techstds/standard/std1090/1090.html).