

Working Safely with Elevators

Machine Guarding Task Force: Background

A Task Force was formed in 2007 to address elevator machine room safety concerns of building owners and the elevator industry. Representation included the Ministry of Labour (MOL), the Technical Standards and Safety Authority (TSSA), the elevator industry, and building owners. In May 2009, the Task Force released a draft entitled “*Elevator Machine Room Equipment Guarding: A Best Practices Guideline Produced by Industry Stakeholders*”.

The guideline is intended to be a living document to be revised as best practices evolve. It is also a timely guide for employers, supervisors, workers and owners regarding rights and responsibilities under the Occupational Safety and Health Act. (Additional information and the document itself are on the TSSA web site at: <http://www.tssa.org/viewNews.asp?ID=435>)

Enforcement: Whose Responsibility?

In Ontario, enforcement of machinery guarding and protection of workers is the responsibility of the MOL, while the TSSA ensures public and mechanic safety on elevating devices. This means that the TSSA is **not** the enforcing agency for machinery guarding for the safety of licensed elevator mechanics or inspectors. In any event, the elevator owner is responsible for the safety of their equipment, and bears the cost for appropriate machinery guarding.

The Challenge: What is Safe?

Elevator equipment varies considerably from building to building, so it is difficult to develop a standard that absolutely defines what is safe, what is not, and what must be remedied. Elevator mechanics, inspectors, and consultants may offer opinions concerning the safety of equipment and related machinery guarding, but the final decision as to adequacy ultimately rests with an MOL inspector.

The TSSA enforces the Elevator Safety Code to ensure that all elevator equipment in machine rooms and hoistways is protected by a controlled boundary (i.e. a locked door). However, some stakeholders believe that guards (either close-fitting or perimeter) custom designed for specific equipment is needed. While these guards can eliminate some accidental contact, they can also increase the cost of servicing the equipment, make it less safe to service, and/or prevent service altogether.

Delta Elevator’s Primary Concern: Protecting the Public

In order to achieve this goal, Delta recognizes ***the need to provide a safe working environment for its employees*** as they maintain elevators, and also ***the need to allow for effective elevator maintenance*** to take place. Balancing these requirements ensures that the safety of the public and the requirements of the elevator owner are best served.

Delta Elevator considers that machinery guarding is one component of the many safety aspects associated with an elevating device and that all hazards must be addressed wherever they are present within and around elevators, machine rooms, and hoistways. As such, we do not believe there is a carte blanche solution to every application. Each machine room layout is different, and each situation may require a customized solution.

Recent Developments: MOL Inspections

The MOL has shown concern regarding worker safety in traction elevator machine rooms. However, machine guarding remains a difficult task because there are no **approved** solutions by either the MOL or the TSSA. Furthermore, consultants typically do not identify a solution. Instead, specifications state that the guarding has to meet OH&SA Ontario Regulation 851.

(Hydraulic elevator machine rooms generally do not require guarding. A locked door with a unique key and labeled "Restricted access to trained personnel only" is your best guard.)

Options: Component versus Global Guarding

The draft Best Practices Guideline issued by the multi-stakeholder Task Force has two options:

Option 1: Component Guarding - custom built guards that are installed over each moving component and pinch hazard (e.g. sheaves, hoist ropes, governors).

Option 2: Global Guarding - fencing installed in the machine room to separate the machines from the controllers. This is usually a less expensive option. However, the draft Best Practices Guideline is under review, with indications that a secondary guard will be required (i.e. a safety circuit that is broken if the fencing is not in place). This increases the cost significantly.

Stakeholder Response: No Standardization

In either case, the addition of machine guarding requires a Minor B submission to the TSSA, installation by a licensed elevator contractor, and a subsequent TSSA inspection. **Acceptance by the TSSA does not mean approval by the MOL.** The MOL may inspect the installation if requested, but will only advise if the installation is acceptable to the specific inspector. The MOL does not certify a machine guarding solution. **Machine guarding installed today may not meet future requirements as they become standardized among the stakeholders.**

Some companies have been moving ahead of industry due process in an effort to sell a particular machine guarding solution. Their emphasis on worker safety is legitimate, but it does not give owners a complete picture. For example, the installation of machine guarding can make servicing the equipment less safe and can also cause owners additional costs to ensure that electrical clearance requirements are still met as per the Electrical Safety Authority.

TSSA Director's Order 245/10: Car Top Railings

Due to the lack of clear direction from the TSSA, MOL, or consultants, we recommend that owners invest in car top railings instead. As you are aware, the TSSA has recently issued Director's Order 245/10 that **requires** all elevators with more than 300 mm clearance between the car and the hoistway on any side to have car top railings installed to specific standards. The work to comply with the directive must be completed by Dec 1, 2013. **Through the DO, the TSSA has indicated that this is a high risk hazard that must be dealt with by owners.**

Please contact Delta if you have any safety questions or if you would like pricing for car top railings for you elevating devices.