

Working Safely with Elevators

Machine Room 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 document 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 thus 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 Concerns: Protecting the Worker and 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 to keep riders safe. 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 typically requires 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 usually the best guard.)

Options: Component versus Global Guarding

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

Option 1: Component Guarding

This involves custom built guards that are installed over each moving component and pinch hazard (e.g. sheaves, hoist ropes, governors).

Option 2: Global Guarding

This is fencing installed in the machine room to separate the machines from the controllers. While this is usually the less expensive option in its simplest application, the Best Practices Guideline suggests that a secondary guard be included (i.e. a safety circuit that is broken if the fencing is not in place), which increases the cost significantly.

Stakeholder Response: No Standardization

In either case, the addition of machine room guarding requires a Minor A submission to the TSSA, installation by a licensed elevator contractor, and a subsequent TSSA inspection. ***Note that 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 because the MOL does not certify machine guarding solutions in general.

Also, owners and management companies should recognize that machine guarding solutions installed today may not meet future requirements as they become standardized among industry stakeholders.

Some companies have taken the approach to sell a standard machine room guarding solution without considering site specific issues. While, their emphasis on worker safety is legitimate, such an approach may 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.

Please contact Delta if you have any safety questions or if you would like pricing for machine room guarding for you elevating devices.