



## **STUDY IN SAFETY PROCEDURES IN ELEVATOR INDUSTRY**

<sup>1</sup>Dr. Nihal Anwar Siddiqui, <sup>2</sup>Mr. Anurag Manglik, <sup>3</sup>Mukesh Singh

University of Petroleum and Energy Studies Dehradun.

---

### **Abstract**

Safety Procedure in Elevator industry is focused on establishing and maintaining effective safety management systems, and specifying key mandatory work rules designed to mitigate the possibility of injury or illness from hazards common to our industry.

The Standards apply to all job sites, factories, facilities and describe mandatory safe working provisions and practices (supported by training) for all associates responsible for and involved in the installation, examination, inspection, testing, product design, manufacturing, service, maintenance, repair and dismantling (including complete demolition) of elevators and associated equipment.

---

### **Key words**

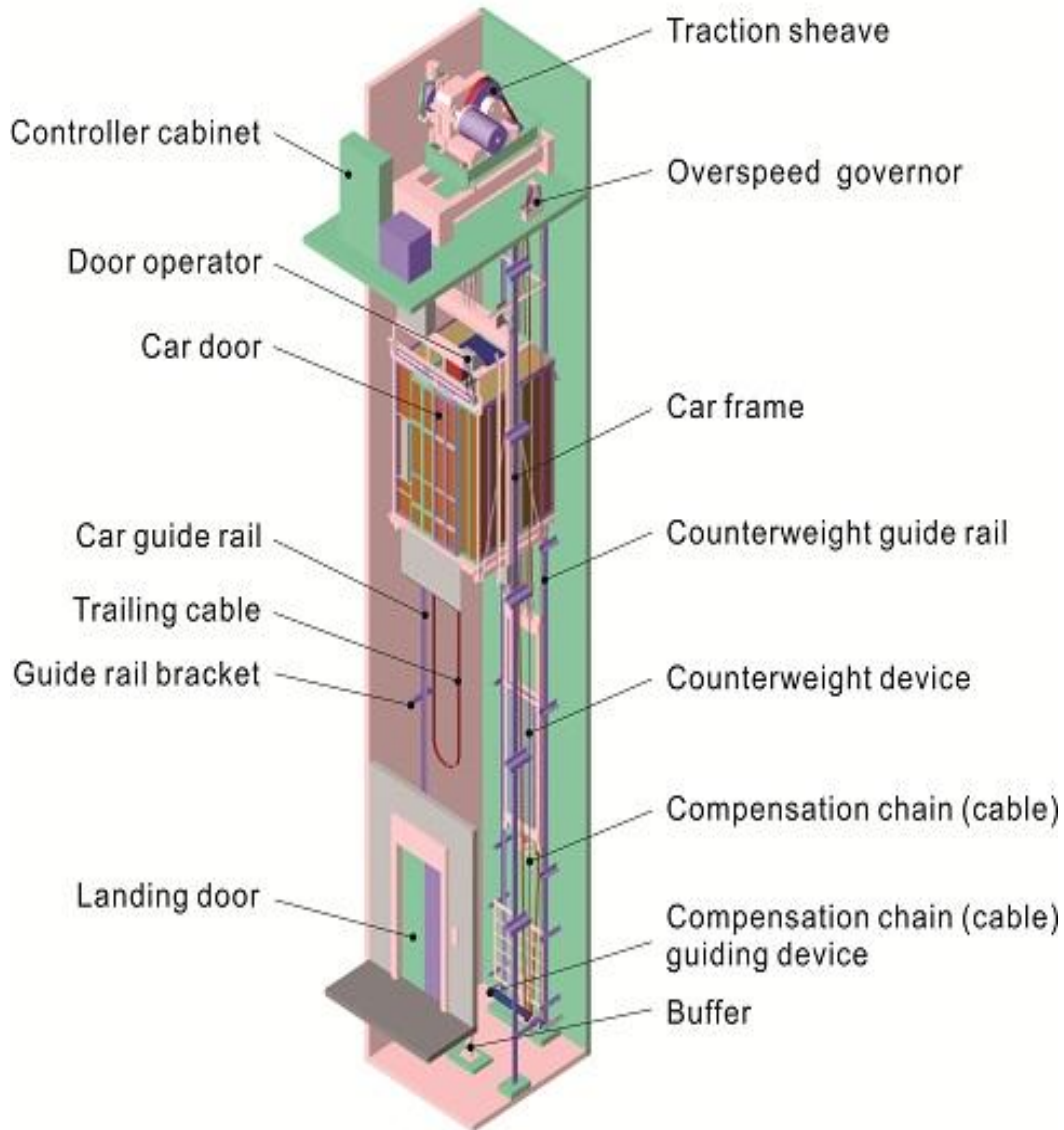
Elevator, Training, Safety procedures

### **Introduction**

In the Elevator industry the safe practices apply to all aspects of the work environment and reflect our collective experience in the elevator, and people moving equipment business and the construction industry.

Unless noted otherwise, the equipment related requirements of this Standard apply to all newly designed and currently manufactured equipment. For all major modernization jobs (i.e. those including a controller change), the entire elevator system must be upgraded to comply with applicable codes and as a minimum include the following components, which must fully comply with the requirements of this Standard:

- top-of-car inspection box;
- pit switch(es);
- guarding of 2:1 car-top sheave;
- top-of-car guardrail;
- pit ladder;
- mechanical guarding in the machine-room;
- electrical guarding;



## **Material & Methodology**

### **1. Working in the Hoistway**

To gain access to the hoistway via landing doors, with the car situated at some convenient distance away from its normal position at a landing, an approved unlocking device or access key switch shall be used to unlock a landing door.

Before the door is opened for access, it must be decided if the work to be done will require the electrical power supply. If not, the main line switch must be locked in the off position (or the fuses must be withdrawn and retained in a secure place) and an appropriate lockout/tagout device shall be attached to the main line switch.

### **2. Working on the Car Top**

Before attempting to gain access to the hoistway, it should be decided if the work to be done will require the electrical power supply. If not, the main line switch must be tagged and locked in the off position (or the fuses must be withdrawn and retained in a secure place) and an appropriate lockout/tagout device shall be attached to the main line switch.

### **3. Working in the Pit**

Entry into the pit will only be permitted when two independent means of shutting off the elevator are available and used. For example, the use of an emergency stop switch and opening the door lock.

Where a redundant means of protection is not available, the main line switch must be tagged and locked in the off position (or the fuses should be withdrawn and be retained in a secure place).

### **4.Landings**

It should be decided if the work to be done will require the electrical power supply. If not, the main switch must be tagged and locked in the off position (or the fuses must be withdrawn and retained in a secure place). Effective precautions shall be provided to protect an open landing entrance.

### **5. Machine Rooms**

Hazards in machine rooms relating to rotating machinery and electrical equipment. A barrier, capable of being fixed at the entrance, and which comprises a guard rail at least 900 mm high with a mid-rail and toe-board (same as top-of-car guardrail requirements), or a solid enclosure.

### **6. Running Platforms and False Cars**

Running platforms (permanent equipment) and false cars are used to accomplish work in the hoistway during construction and on some modernization jobs. Considering the variety of such devices that are found throughout the world, each company must develop procedures and standards of performance for each model of this type of equipment.

### **Results and Discussion**

Each entity shall conduct a systematic analysis of work place and job site risks and then develop and implement controls for the identified hazards. This process shall be accomplished at least once a year.

A job hazard analysis (JHA) must be conducted whenever an applicable approved written work procedure does not exist.

Prior to signature of any new contractual agreement (including maintenance, new equipment, modernization, and open order work), a risk assessment must be made of the work to be done and conditions of the job site. Based on the results of this assessment, prevention and/or control measures necessary to safeguard identified hazards and risks must be established. For new construction sites, where access to the site or location is not possible, the assessment process must anticipate probable risks/hazards.

Control measures that are not the direct responsibility of company must be specifically identified, posted visibly at the site, and put forth as requirements to the building owner, general contractor and/or subcontractor as applicable, and included in the contractual agreement.

### **Acknowledgement**

I submit my prime thanks to our beloved Head of the Department (NR) and Guide **Mr. Anurag Manglik** for his good administration and directions for taking up and completing this Project.

### **References**

- **OTIS WWJSSS**
- **Bombay Lifts Act- 1939**
- **Delhi Lifts rules-1942**