Elevator Safety Division

Elevator Safety Division

Robert Capuani

Division Director

312-814-8734

robert.capuani@illinois.gov

Chet Janus Inspector

OSFM Tech Services

- Claude Schultes

Elevator Inspection Service Co. (EIS)

Anthony DiBiase

Agenda

Elevator Division Overview

Machine Room-Less (MRL)

Fireman's Recall

Statistics

Incidents involving elevators and escalators each year in the United States :

- 30 Deaths
- 17,000 Serious Injuries

Elevator Safety Act

- The Elevator Safety Act passed in 2003
- Administrative Rules became effective April 2007 allowing the OSFM to enforce the provisions of the Act.
- Before this Act there was no conveyance regulation in the State

Objectives

- To ensure public safety by the registration and certification of all conveyances within Illinois.
- To ensure public safety by licensing qualified elevator contractors, mechanics, inspection companies and inspectors.
- Required annual inspections of all conveyances to ensure that they are in proper working order.
- The Office of the Illinois State Fire Marshal oversees compliance with the Elevator Safety Act.

Elevator Safety Statistics

- Registered 35,042 Elevators
- 2,300 Licensed Mechanics
- 351 Licensed Inspectors
- 136 Licensed Contractors
- 63 Licensed Inspection Companies
- 1,141 Apprentice License

Mechanic License

IMAGE

Illinois Office of the State Fire Marshal
Elevator Safety Division

THIS IS TO CERTIFY THAT

NAME

Elevator Mechanic License

HAS MET ALL THE REQUIREMENTS AND IS DULY AUTHORIZED TO PERFORM SUCH WORK AS SET FORTH BY THE ELEVATOR SAFETY REVIEW BOARD IN THIS STATE.

License # IL **NUMBER**

Expires: 03/26/2017

Matt Perez
STATE FIRE MARSHAL

(Mechanic's) Apprentice

IMAGE

Illinois Office of the State Fire Marshal
Elevator Safety Division

THIS IS TO CERTIFY THAT

NAME

Elevator Apprentice or Helper

Registration

IS AUTHORIZED BY THE OFFICE OF THE STATE FIRE MARSHAL TO PERFORM WORK WITHIN THE ELEVATOR INDUSTRY UNDER THE DIRECT SUPERVISION OF A LICENSED ELEVATOR MECHANIC OR LICENSED LIMITED ELEVATOR MECHANIC AS SET FORTH BY THE ELEVATOR SAFETY REVIEW BOARD IN THIS STATE ISSUED THIS DAY 07/28/2016.

License # **IL** **NUMBER**

Matt Perez

STATE FIRE MARSHAL

Inspector License

IMAGE

Illinois Office of the State Fire Marshal
Elevator Safety Division

THIS IS TO CERTIFY THAT

NAME

Elevator Inspector License

HAS MET ALL THE REQUIREMENTS AND IS DULY AUTHORIZED TO PERFORM SUCH WORK AS SET FORTH BY THE ELEVATOR SAFETY REVIEW BOARD IN THIS STATE.

License # IL- **NUMBER**

Expires: 07/31/2018

Matt Perez
STATE FIRE MARSHAL

Qualified Elevator Inspector

- Inspectors must be QEI certified to qualify for an Illinois Inspectors License

Codes

- All conveyances shall be designed, constructed, installed, operated, inspected, tested, maintained, altered and repaired in accordance with the following standards and safety codes:

- American Society of Mechanical Engineers (ASME)
  Three Park Avenue
  New York NY 10016-5990

New Construction and Alterations

- Safety Code for Elevators and Escalators (ASME A17.1-2013/CSA B44-2013) and Performance-Based Safety Code for Elevators and Escalators (ASME A17.7-2007/CSA B44.7-07)

Codes

Existing Conveyances

- Safety Code for Existing Elevators and Escalators (ASME A17.3-2005), but only as required under Section 35(h) and (i) of the Act and subsection (d) of this Section

Codes

Basis for Certifying Inspectors

- Standard for the Qualification of Elevator Inspectors (ASME QEI-1-2013).

Codes

- **Handicapped Lifts**
- Safety Standard for Platform Lifts and Stairway Chairlifts (ASME A18.1-2011)

Codes

- American Society of Civil Engineers (ASCE)

  1801 Alexander Bell Drive

  Reston VA 20191-4400

- Automated People Mover Standards (ANSI/ASCE/T&DI 21-13).

Codes

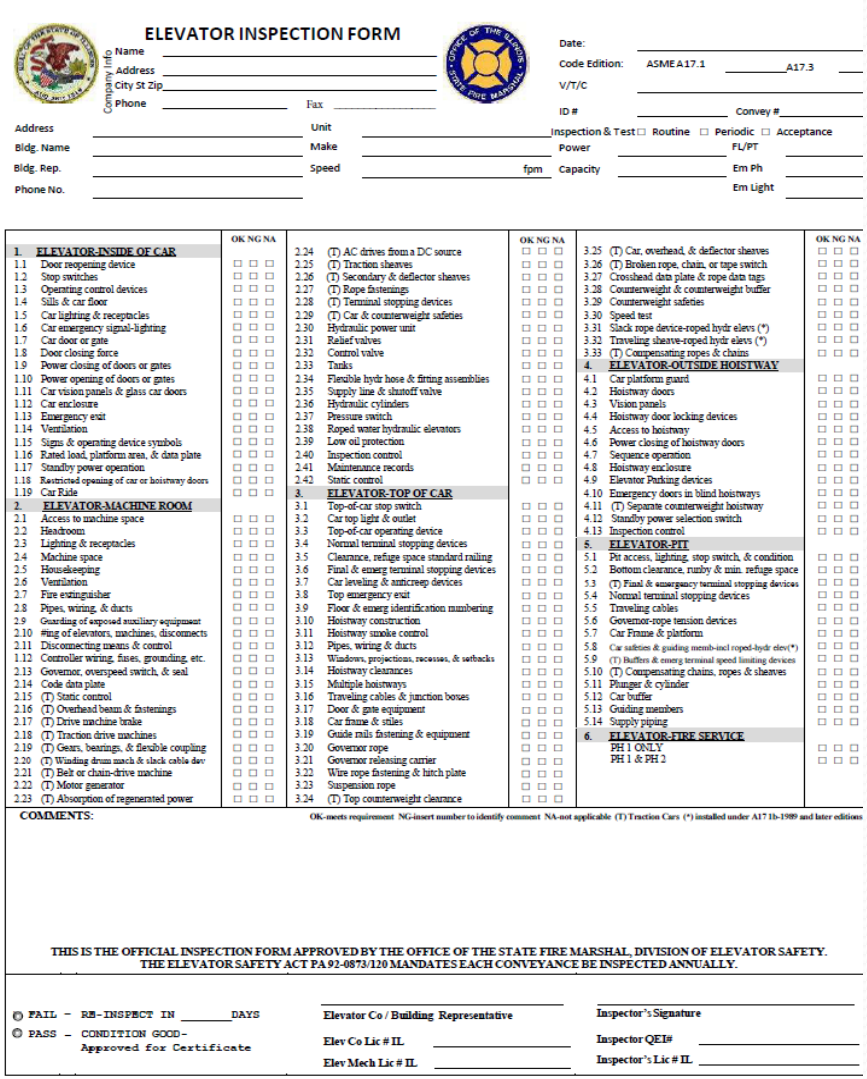
- American Society of Mechanical Engineers (ASME)

  Three Park Avenue

  New York NY 10016-5990

- Guide for Inspection of Elevators, Escalators, and Moving Walks (ASME A17.2-2012)

Elevator Inspection Form



ELEVATOR INSPECTION FORM

Company Info
Name
Address
City St Zip
Phone Fax

Date:
Code Edition: ASME A17.1 A17.3
V/T/C
ID # Convey #
Inspection & Test ☐ Routine ☐ Periodic ☐ Acceptance

Address Unit
Bldg. Name Make
Bldg. Rep. Speed fpm
Phone No.

Power FL/PT
Capacity Em Ph
Em Light

		OK	NG	NA
1.	**ELEVATOR-INSIDE OF CAR**			
1.1	Door reopening device	☐	☐	☐
1.2	Stop switches	☐	☐	☐
1.3	Operating control devices	☐	☐	☐
1.4	Sills & car floor	☐	☐	☐
1.5	Car lighting & receptacles	☐	☐	☐
1.6	Car emergency signal-lighting	☐	☐	☐
1.7	Car door or gate	☐	☐	☐
1.8	Door closing force	☐	☐	☐
1.9	Power closing of doors or gates	☐	☐	☐
1.10	Power opening of doors or gates	☐	☐	☐
1.11	Car vision panels & glass car doors	☐	☐	☐
1.12	Car enclosure	☐	☐	☐
1.13	Emergency exit	☐	☐	☐
1.14	Ventilation	☐	☐	☐
1.15	Signs & operating device symbols	☐	☐	☐
1.16	Rated load, platform area, & data plate	☐	☐	☐
1.17	Standby power operation	☐	☐	☐
1.18	Restricted opening of car or hoistway doors	☐	☐	☐
1.19	Car Ride	☐	☐	☐
2.	**ELEVATOR-MACHINE ROOM**			
2.1	Access to machine space	☐	☐	☐
2.2	Headroom	☐	☐	☐
2.3	Lighting & receptacles	☐	☐	☐
2.4	Machine space	☐	☐	☐
2.5	Housekeeping	☐	☐	☐
2.6	Ventilation	☐	☐	☐
2.7	Fire extinguisher	☐	☐	☐
2.8	Pipes, wiring, & ducts	☐	☐	☐
2.9	Guarding of exposed auxiliary equipment	☐	☐	☐
2.10	#ing of elevators, machines, disconnects	☐	☐	☐
2.11	Disconnecting means & control	☐	☐	☐
2.12	Controller wiring, fuses, grounding, etc.	☐	☐	☐
2.13	Governor, overspeed switch, & seal	☐	☐	☐
2.14	Code data plate	☐	☐	☐
2.15	(T) Static control	☐	☐	☐
2.16	(T) Overhead beam & fastenings	☐	☐	☐
2.17	(T) Drive machine brake	☐	☐	☐
2.18	(T) Traction drive machines	☐	☐	☐
2.19	(T) Gears, bearings, & flexible coupling	☐	☐	☐
2.20	(T) Winding drum mach & slack cable dev	☐	☐	☐
2.21	(T) Belt or chain-drive machine	☐	☐	☐
2.22	(T) Motor generator	☐	☐	☐
2.23	(T) Absorption of regenerated power	☐	☐	☐
2.24	(T) AC drives from a DC source	☐	☐	☐
2.25	(T) Traction sheaves	☐	☐	☐
2.26	(T) Secondary & deflector sheaves	☐	☐	☐
2.27	(T) Rope fastenings	☐	☐	☐
2.28	(T) Terminal stopping devices	☐	☐	☐
2.29	(T) Car & counterweight safeties	☐	☐	☐
2.30	Hydraulic power unit	☐	☐	☐
2.31	Relief valves	☐	☐	☐
2.32	Control valve	☐	☐	☐
2.33	Tanks	☐	☐	☐
2.34	Flexible hydr hose & fitting assemblies	☐	☐	☐
2.35	Supply line & shutoff valve	☐	☐	☐
2.36	Hydraulic cylinders	☐	☐	☐
2.37	Pressure switch	☐	☐	☐
2.38	Roped water hydraulic elevators	☐	☐	☐
2.39	Low oil protection	☐	☐	☐
2.40	Inspection control	☐	☐	☐
2.41	Maintenance records	☐	☐	☐
2.42	Static control	☐	☐	☐
3.	**ELEVATOR-TOP OF CAR**			
3.1	Top-of-car stop switch	☐	☐	☐
3.2	Car top light & outlet	☐	☐	☐
3.3	Top-of-car operating device	☐	☐	☐
3.4	Normal terminal stopping devices	☐	☐	☐
3.5	Clearance, refuge space standard railing	☐	☐	☐
3.6	Final & emerg terminal stopping devices	☐	☐	☐
3.7	Car leveling & anticreep devices	☐	☐	☐
3.8	Top emergency exit	☐	☐	☐
3.9	Floor & emerg identification numbering	☐	☐	☐
3.10	Hoistway construction	☐	☐	☐
3.11	Hoistway smoke control	☐	☐	☐
3.12	Pipes, wiring & ducts	☐	☐	☐
3.13	Windows, projections, recesses, & setbacks	☐	☐	☐
3.14	Hoistway clearances	☐	☐	☐
3.15	Multiple hoistways	☐	☐	☐
3.16	Traveling cables & junction boxes	☐	☐	☐
3.17	Door & gate equipment	☐	☐	☐
3.18	Car frame & stiles	☐	☐	☐
3.19	Guide rails fastening & equipment	☐	☐	☐
3.20	Governor rope	☐	☐	☐
3.21	Governor releasing carrier	☐	☐	☐
3.22	Wire rope fastening & hitch plate	☐	☐	☐
3.23	Suspension rope	☐	☐	☐
3.24	(T) Top counterweight clearance	☐	☐	☐
3.25	(T) Car, overhead, & deflector sheaves	☐	☐	☐
3.26	(T) Broken rope, chain, or tape switch	☐	☐	☐
3.27	Crosshead data plate & rope data tags	☐	☐	☐
3.28	Counterweight & counterweight buffer	☐	☐	☐
3.29	Counterweight safeties	☐	☐	☐
3.30	Speed test	☐	☐	☐
3.31	Slack rope device-roped hydr elevs (*)	☐	☐	☐
3.32	Traveling sheave-roped hydr elevs (*)	☐	☐	☐
3.33	(T) Coupensating ropes & chains	☐	☐	☐
4.	**ELEVATOR-OUTSIDE HOISTWAY**			
4.1	Car platform guard	☐	☐	☐
4.2	Hoistway doors	☐	☐	☐
4.3	Vision panels	☐	☐	☐
4.4	Hoistway door locking devices	☐	☐	☐
4.5	Access to hoistway	☐	☐	☐
4.6	Power closing of hoistway doors	☐	☐	☐
4.7	Sequence operation	☐	☐	☐
4.8	Hoistway enclosure	☐	☐	☐
4.9	Elevator Parking devices	☐	☐	☐
4.10	Emergency doors in blind hoistways	☐	☐	☐
4.11	(T) Separate counterweight hoistway	☐	☐	☐
4.12	Standby power selection switch	☐	☐	☐
4.13	Inspection control	☐	☐	☐
5.	**ELEVATOR-PIT**			
5.1	Pit access, lighting, stop switch, & condition	☐	☐	☐
5.2	Bottom clearance, runby & min. refuge space	☐	☐	☐
5.3	(T) Final & emergency terminal stopping devices	☐	☐	☐
5.4	Normal terminal stopping devices	☐	☐	☐
5.5	Traveling cables	☐	☐	☐
5.6	Governor-rope tension devices	☐	☐	☐
5.7	Car Frame & platform	☐	☐	☐
5.8	Car safeties & guiding memb-incl roped-hydr elev(*)	☐	☐	☐
5.9	(T) Buffers & emerg terminal speed limiting devices	☐	☐	☐
5.10	(T) Coupensating chains, ropes & sheaves	☐	☐	☐
5.11	Plunger & cylinder	☐	☐	☐
5.12	Car buffer	☐	☐	☐
5.13	Guiding members	☐	☐	☐
5.14	Supply piping	☐	☐	☐
6.	**ELEVATOR-FIRE SERVICE**			
	PH 1 ONLY	☐	☐	☐
	PH 1 & PH 2	☐	☐	☐

COMMENTS:

OK-meets requirement NG-insert number to identify comment NA-not applicable (T) Traction Cars (*) installed under A17.1b-1989 and later editions

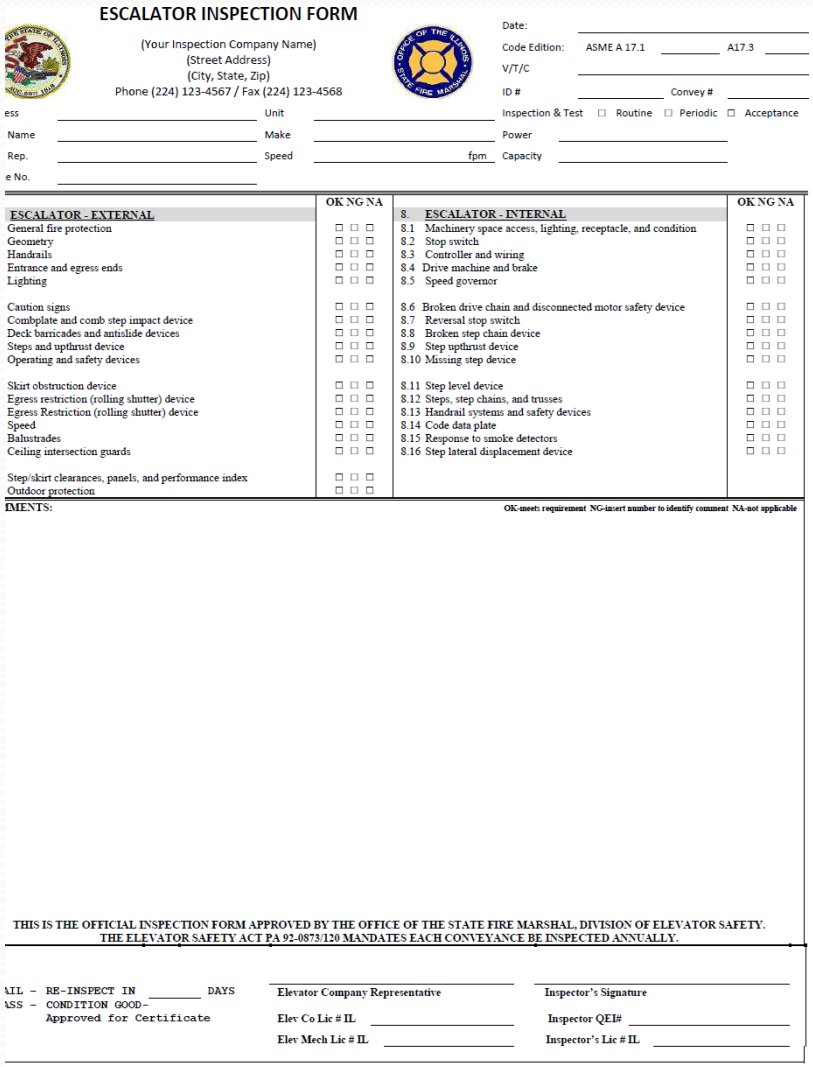
THIS IS THE OFFICIAL INSPECTION FORM APPROVED BY THE OFFICE OF THE STATE FIRE MARSHAL, DIVISION OF ELEVATOR SAFETY. THE ELEVATOR SAFETY ACT PA 92-0873/120 MANDATES EACH CONVEYANCE BE INSPECTED ANNUALLY.

◎ FAIL – RE-INSPECT IN _____DAYS
◎ PASS – CONDITION GOOD-
Approved for Certificate

Elevator Co / Building Representative
Elev Co Lic # IL
Elev Mech Lic # IL

Inspector's Signature
Inspector QEI#
Inspector's Lic # IL

Escalator Inspection Form



ESCALATOR INSPECTION FORM

(Your Inspection Company Name)
(Street Address)
(City, State, Zip)
Phone (224) 123-4567 / Fax (224) 123-4568

Date:
Code Edition: ASME A 17.1 _____ A17.3 _____
V/T/C
ID # _____ Convey # _____
Inspection & Test ☐ Routine ☐ Periodic ☐ Acceptance

ess _____ Unit _____
Name _____ Make _____ Power _____
Rep. _____ Speed _____ fpm Capacity _____
e No. _____

ESCALATOR - EXTERNAL	OK	NG	NA
General fire protection	☐	☐	☐
Geometry	☐	☐	☐
Handrails	☐	☐	☐
Entrance and egress ends	☐	☐	☐
Lighting	☐	☐	☐
Caution signs	☐	☐	☐
Combplate and comb step impact device	☐	☐	☐
Deck barricades and antislide devices	☐	☐	☐
Steps and upthrust device	☐	☐	☐
Operating and safety devices	☐	☐	☐
Skirt obstruction device	☐	☐	☐
Egress restriction (rolling shutter) device	☐	☐	☐
Egress Restriction (rolling shutter) device	☐	☐	☐
Speed	☐	☐	☐
Balustrades	☐	☐	☐
Ceiling intersection guards	☐	☐	☐
Step/skirt clearances, panels, and performance index	☐	☐	☐
Outdoor protection	☐	☐	☐

8. ESCALATOR - INTERNAL	OK	NG	NA
8.1 Machinery space access, lighting, receptacle, and condition	☐	☐	☐
8.2 Stop switch	☐	☐	☐
8.3 Controller and wiring	☐	☐	☐
8.4 Drive machine and brake	☐	☐	☐
8.5 Speed governor	☐	☐	☐
8.6 Broken drive chain and disconnected motor safety device	☐	☐	☐
8.7 Reversal stop switch	☐	☐	☐
8.8 Broken step chain device	☐	☐	☐
8.9 Step upthrust device	☐	☐	☐
8.10 Missing step device	☐	☐	☐
8.11 Step level device	☐	☐	☐
8.12 Steps, step chains, and trusses	☐	☐	☐
8.13 Handrail systems and safety devices	☐	☐	☐
8.14 Code data plate	☐	☐	☐
8.15 Response to smoke detectors	☐	☐	☐
8.16 Step lateral displacement device	☐	☐	☐

IMENTS:

OK-meets requirement NG-insert number to identify comment NA-not applicable

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THE ELEVATOR SAFETY ACT PA 92-0873/120 MANDATES EACH CONVEYANCE BE INSPECTED ANNUALLY.

AIL - RE-INSPECT IN _____ DAYS
ASS - CONDITION GOOD-
Approved for Certificate

Elevator Company Representative
Elev Co Lic # IL _____
Elev Mech Lic # IL _____

Inspector's Signature
Inspector QEI# _____
Inspector's Lic # IL _____

Platform Stairway Form

PLATFORM & STAIRWAY LIFT INSPECTION FORM

(Your Inspection Company)
(Street Address)
(City, State Zip)

Phone _____ / Fax _____

Date: _____
Code Edition: ASMEA18.1 _____
V/T/C _____
ID # _____ Convey # _____

Address _____ Unit _____ Inspection & Test ☐ Routine ☐ Periodic ☐ Acceptance
Bldg. Name _____ Make _____ Power _____ FL/PT _____
Bldg. Rep. _____ Speed _____ fpm Capacity _____ Em Ph _____
Phone No. _____ Em Light _____

10.2.2.1 INSIDE PLATFORM INSPECTIONS	OK	NG	NA
a. Stop Switches	☐	☐	☐
b. Operating Control Devices	☐	☐	☐
c. Floor and Landing Sill	☐	☐	☐
d. Lighting	☐	☐	☐
e. Emergency Signal	☐	☐	☐
f. Door or Gate	☐	☐	☐
g. Enclosure	☐	☐	☐
h. Floor	☐	☐	☐
i. Signals and Operating Symbols	☐	☐	☐
j. Rated Load / Platform FL Area / Data Plate	☐	☐	☐
k. Ride	☐	☐	☐
10.2.2.2 MACHINE INSPECTIONS			
a. Enclosure of Machine Space	☐	☐	☐
b. Guarding of Exposed Aux Eq	☐	☐	☐
c. Overhead Beam & Fastenings	☐	☐	☐
d. Drive Machine Brake	☐	☐	☐
e. Traction Drive Machines	☐	☐	☐
f. Gears and Bearings	☐	☐	☐
g. Winding Drum Machine	☐	☐	☐
h. Belt or Chain Drive Machine	☐	☐	☐
i. Traction Sheaves	☐	☐	☐
j. Secondary & Deflector Sheaves	☐	☐	☐
k. Rope Fastenings	☐	☐	☐
l. Slack Rope Devices	☐	☐	☐
m. Governor, Overspeed Device & Seal	☐	☐	☐
n. Platform Safeties	☐	☐	☐
o. Hydraulic Power Unit	☐	☐	☐
p. Control Valves	☐	☐	☐
q. Hydraulic Cylinders	☐	☐	☐

10.2.2.3 INSIDE RUNWAY	OK	NG	NA
a. Platform/Overhead/Deflector Switches	☐	☐	☐
b. Normal Terminal Stopping Switches	☐	☐	☐
c. Final Terminal Stopping Switches	☐	☐	☐
d. Broken Rope, Chain, or Tape Switch	☐	☐	☐
e. Counterweight	☐	☐	☐
f. Head Room	☐	☐	☐
g. Slack Rope Devices	☐	☐	☐
h. Traveling Sheave	☐	☐	☐
i. Platform Safeties & Guiding Members	☐	☐	☐
j. Runway Construction	☐	☐	☐
k. Pipes, Wiring, & Ducts	☐	☐	☐
l. Runway Clearances	☐	☐	☐
m. Traveling Cables & Junction Boxes	☐	☐	☐
n. Door & Gate Equipment	☐	☐	☐
o. Platform Frame	☐	☐	☐
p. Guide Rails Fastenings & Equipment	☐	☐	☐
q. Governor Rope	☐	☐	☐
r. Governor Releasing Carrier	☐	☐	☐
s. Wire Rope Fastenings & Hitch Plate	☐	☐	☐
t. Suspension Rope	☐	☐	☐
u. Compensation Ropes & Chains	☐	☐	☐
10.2.2.4 OUTSIDE RUNWAY INSPECTIONS			
a. Runway Doors	☐	☐	☐
b. Runway Door Locking Devices	☐	☐	☐
c. Runway Enclosure	☐	☐	☐

COMMENTS:

OK-meets requirement NG-insert number to identify comment NA-not applicable

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☐ FAIL – RE-INSPECT IN _____DAYS
☐ PASS – CONDITION GOOD-
Approved for Certificate

Elevator Co / Building Representative
Elev Co Lic # IL _____
Elev Mech Lic # IL _____

Inspector's Signature
Inspector QEI# _____
Inspector's Lic # IL _____

Violations

- Property owners shall have 30 days from the date of the published inspection report to be in full compliance by correcting the violations

Certificate

Certificate of Operation

Illinois Office of the State Fire Marshal
Elevator Safety Division
http://www.sfm.illinois.gov

Robert Capuani
Director, Elevator Safety

Matt Perez
State Fire Marshal

This is to certify that this conveyance has met the required safety inspection and tests in accordance with the Rules adopted pursuant to the Illinois Elevator Safety and Regulation Act, 225 ILCS 312.

Location	Inspected By
Name of Location Address Line 1 Address Line 2	NAME OF INSPECTOR

Conveyance #	Serial #	Capacity	Date Inspected	Expiration Date
H00 1234	**123456**	**2500 Lbs.**	**10/29/2015**	**11/14/2016**

Expired Certificate

How the OSFM insures compliance

Additional Inspector Responsibilities

- Inspectors must verify that each conveyance:
  - is registered,
  - has a Code Data Plate to inspect to the proper code year, and
  - has a Maintenance Control Program

Registration Tag

OSFM Database

- OSFM Database

Code Data Plate

Maintenance Control Program

- Building owners are responsible for having an MCP for each elevator or escalator in the facility, and the contracted maintenance company is responsible for providing and following that plan.
- MCPs may be developed by the equipment manufacturer or a third-party maintenance professional or consultant;
- Maintenance records and repair/replacement records must be available for viewing on site (either physical or electronic);
- MCPs can be very specific to an elevator's intended use
  - Example: the same elevator model may be installed at one location in a three-story public school and down the street in a three-story church or synagogue; the maintenance plans for each elevator can and should anticipate passenger demand (e.g., two days per week of high usage in the church, five days in the school) and seasonal demand (12 months for the church, low use for the school during the summer)

Annual Test

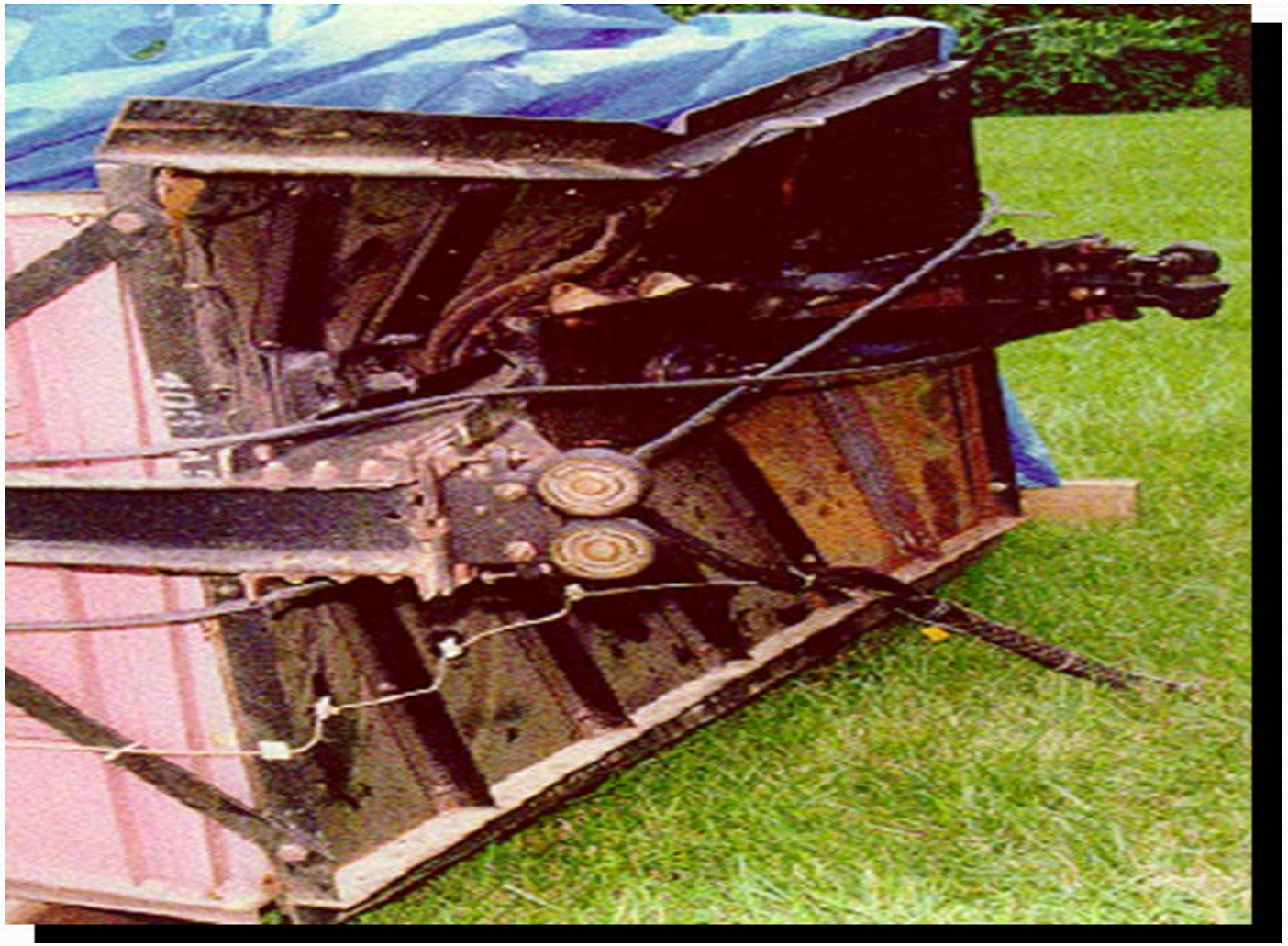
- Every registered conveyance in Illinois **must perform an annual** hydraulic pressure test and traction safety test.
- These tests must be performed by a Illinois Licensed Elevator Mechanic and every test **must be witnessed** by a Illinois Elevator Inspector.

- Escalators are tested annually for all safety devices, including the Step/Skirt Performance Index

No Safeties Required

Hydraulic Elevators

Hydraulic Elevator 4 Fatalities



MRL

Machine-Room-Less Elevators

Machine-Room-Less Elevators are traction elevators that do not have a dedicated machine room above the elevator shaft. The machine sits in the override space and is accessed from the top of the elevator cab when maintenance or repairs are required. The control boxes are located in a control room that is adjacent to the elevator shaft on the highest landing and within around 150 feet of the machine.

. MRL elevators are comparable to geared traction elevators in terms of initial and maintenance costs, but they have relatively low energy consumption compared to geared elevators.

Machine-room-less elevators are becoming the most popular choice for mid-rise buildings where the travel distance is up to 300 feet. They are energy efficient, require less space, and their operation and reliability are on par with gear-less traction elevators.

MRL'S

- While the hoisting motor is installed on the hoistway side wall, the main controller must always be installed outside the hoistway, typically on the top floor next to the landing doors. This controller is situated behind a locked cabinet, in a traditional type machine room with a self closing, self locking door which has to be unlocked using a key for maintenance, repair or emergency purposes.

Speed/Distance

- MRL gearless machine speeds are currently 200 to 350 fpm . Travel distance is currently at 300 feet maximum distance.

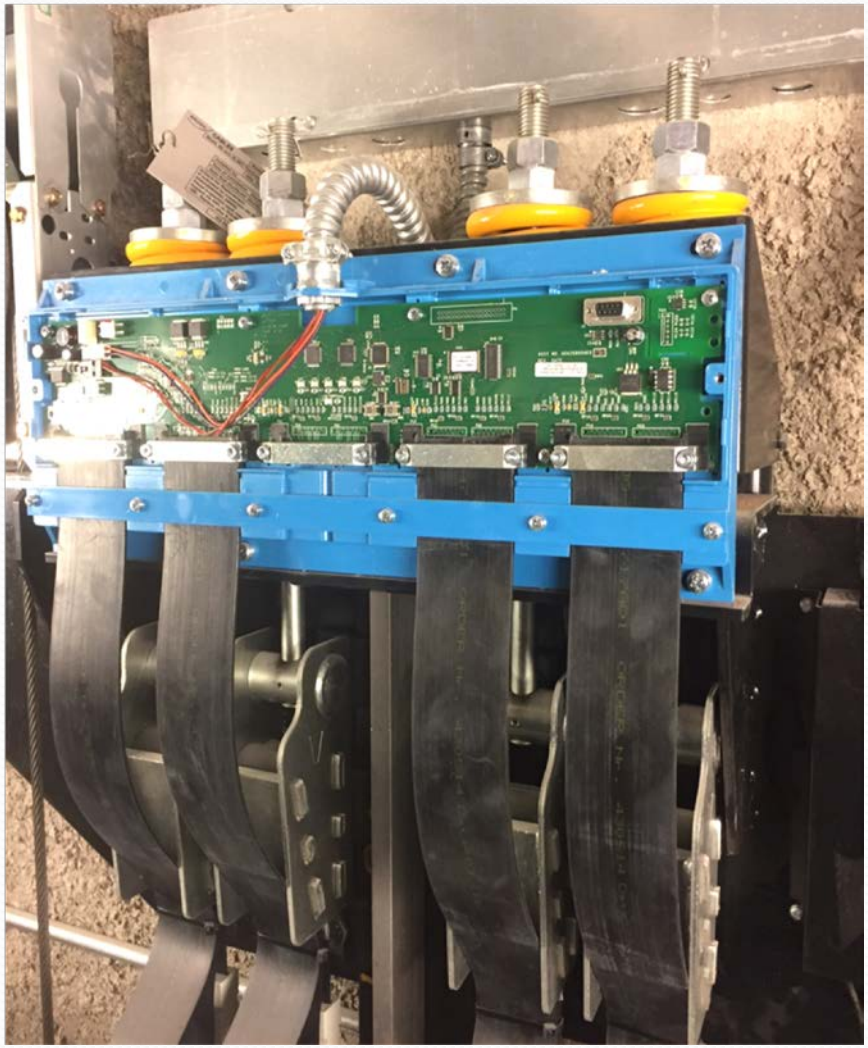
A17.1

2.27.3.2.2(b): A machinery space containing a motor controller or driving machine located in the elevator hoistway, or a control space located in the elevator hoistway requires a fire alarm initiating device regardless of the presence of sprinklers.

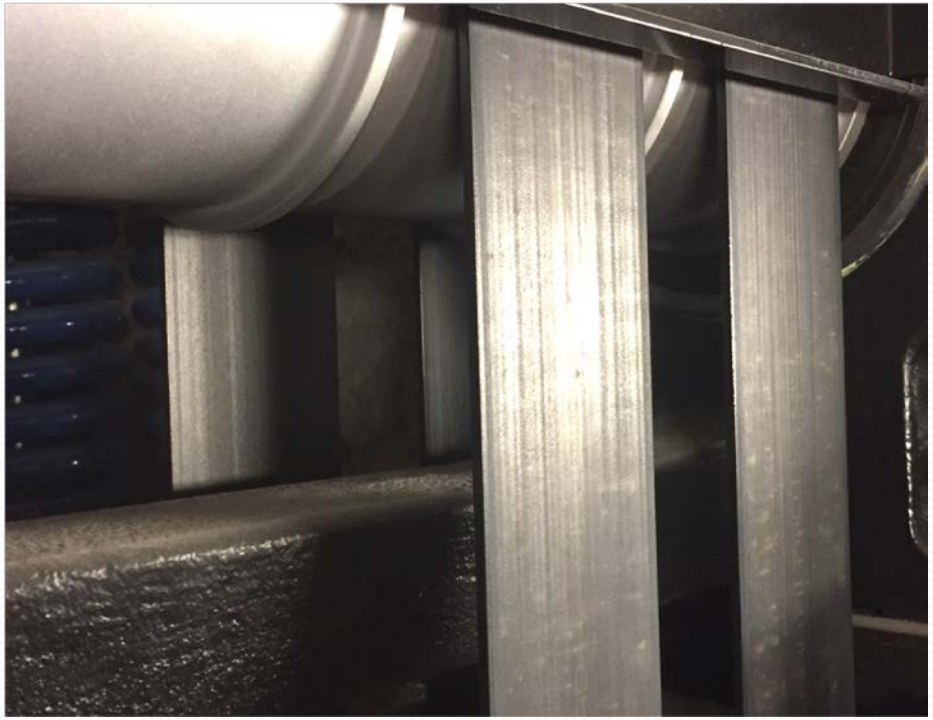
Belts

- Like normal traction elevators, M.R.L. elevators use the conventional steel cord ropes as the hoisting cables. Some elevator brands are using flat steel rope belts instead of conventional ropes. Manufacturers using this technology claim flat steel belt ropes, save space on the hoistway, and allow a minimal size of the hoisting sheave. Flat steel belts are also 30% lighter than conventional steel ropes.

Monitor



Belts



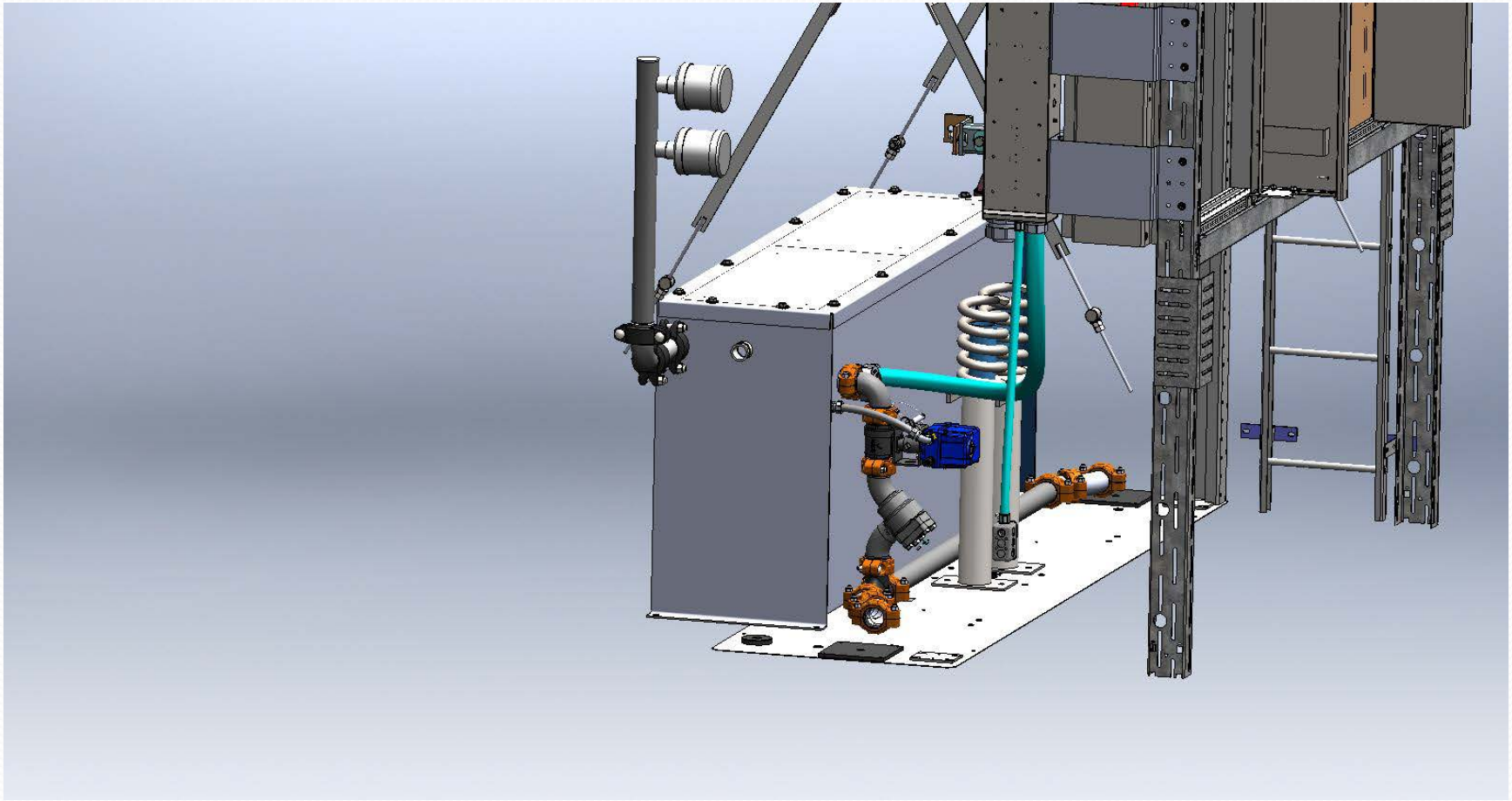
Support

Machine

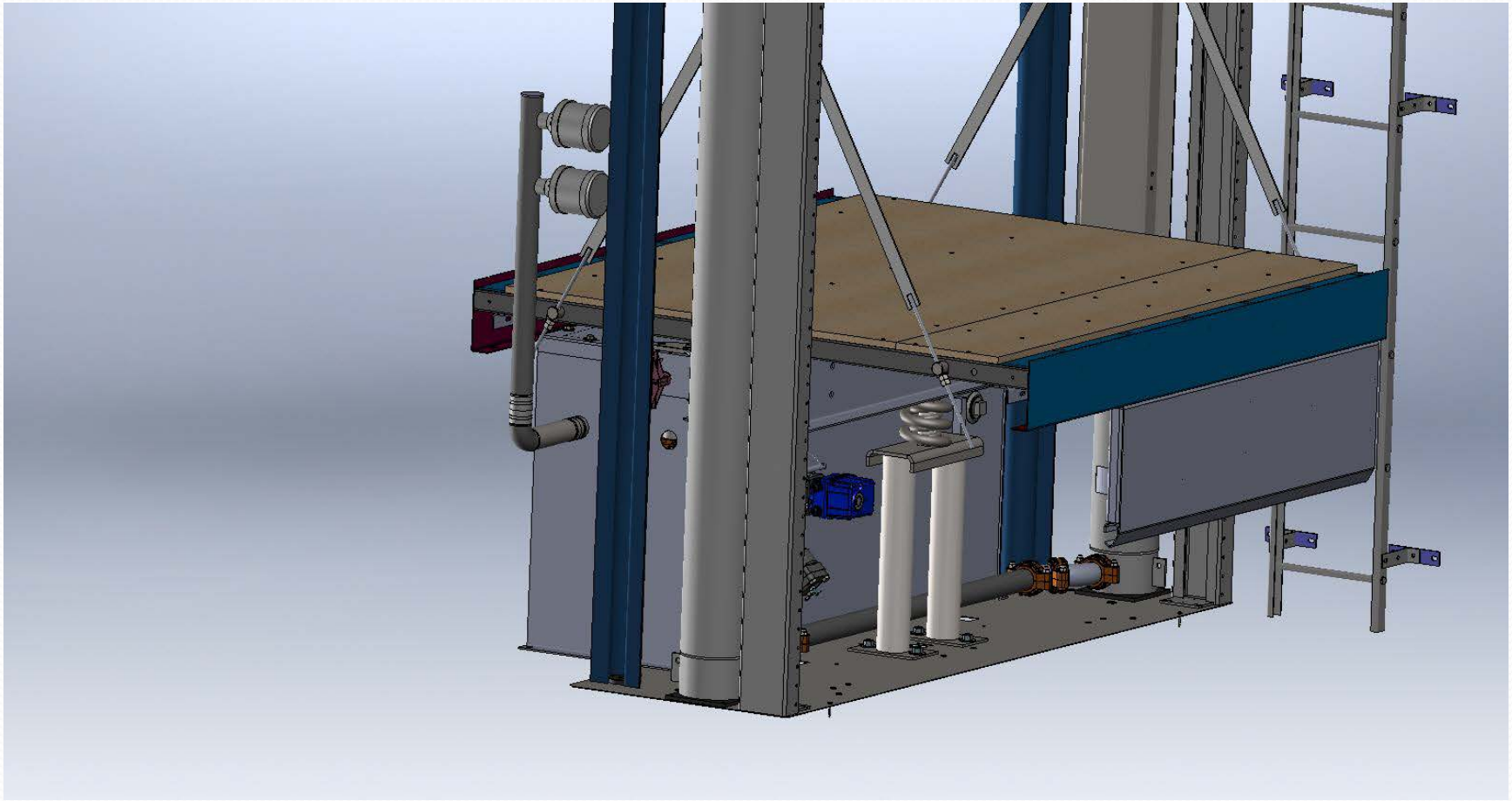
Controller

Controller Type

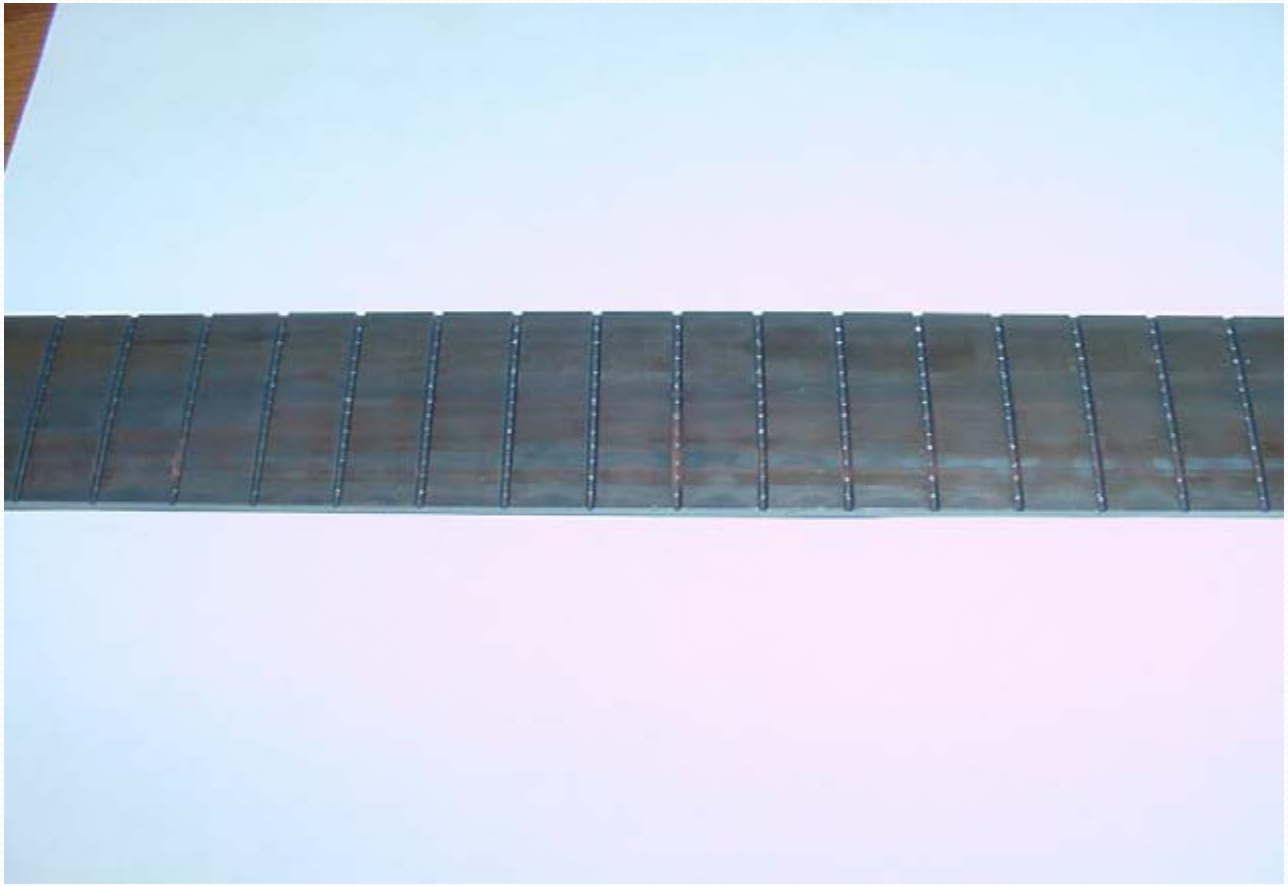
Hydraulic



Tank And platform



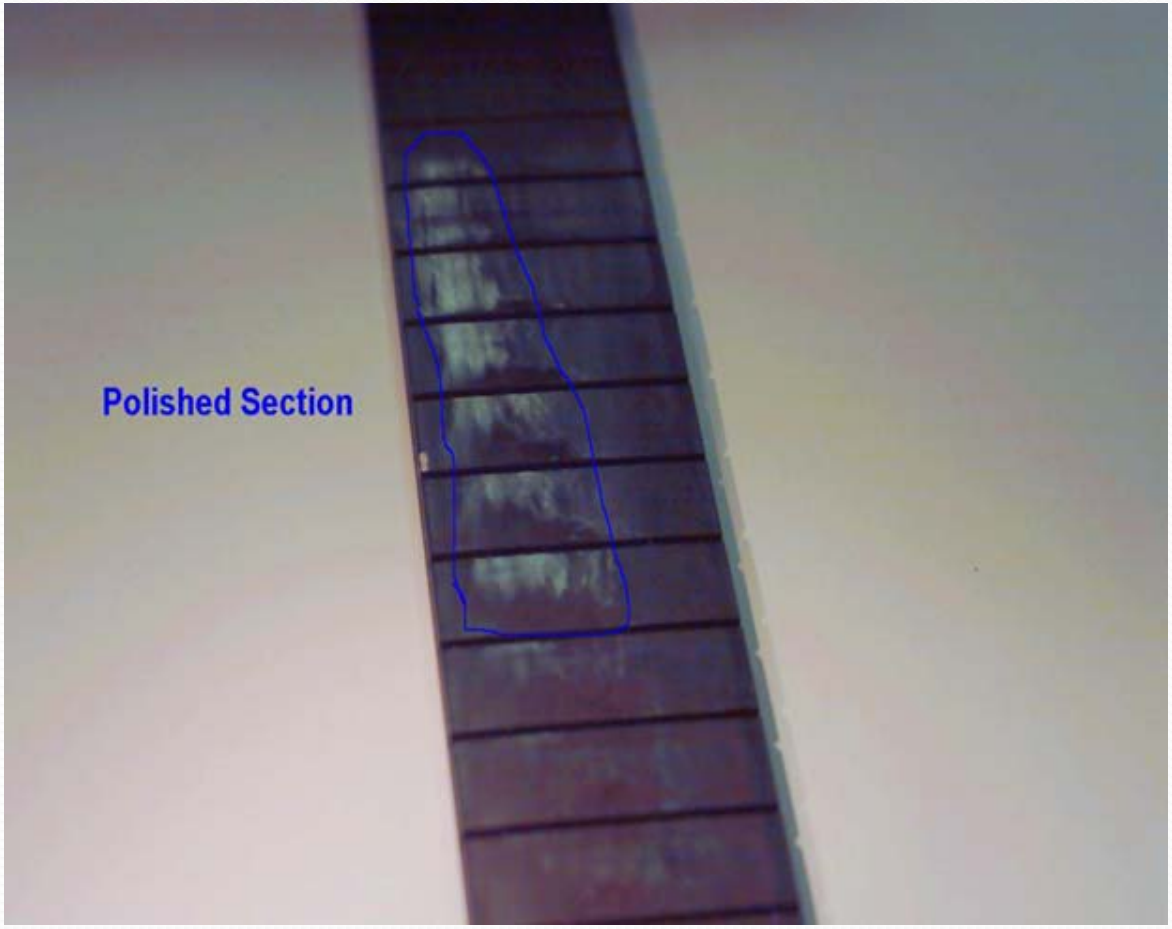
Example of Good Coated-Steel Belt



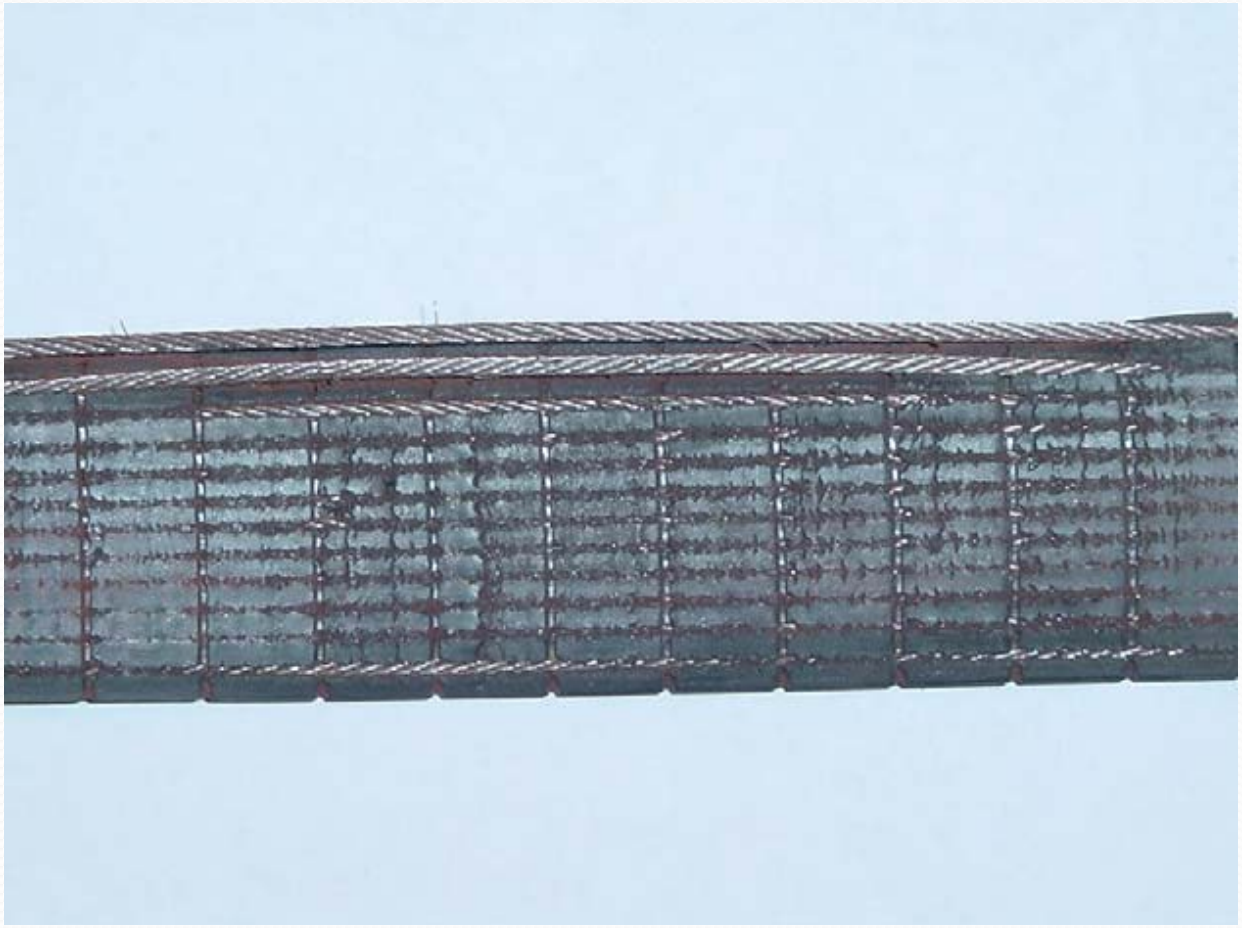
MRL

Traction elevators comprised of belts require sprinkler protection at top and bottom of shaft.

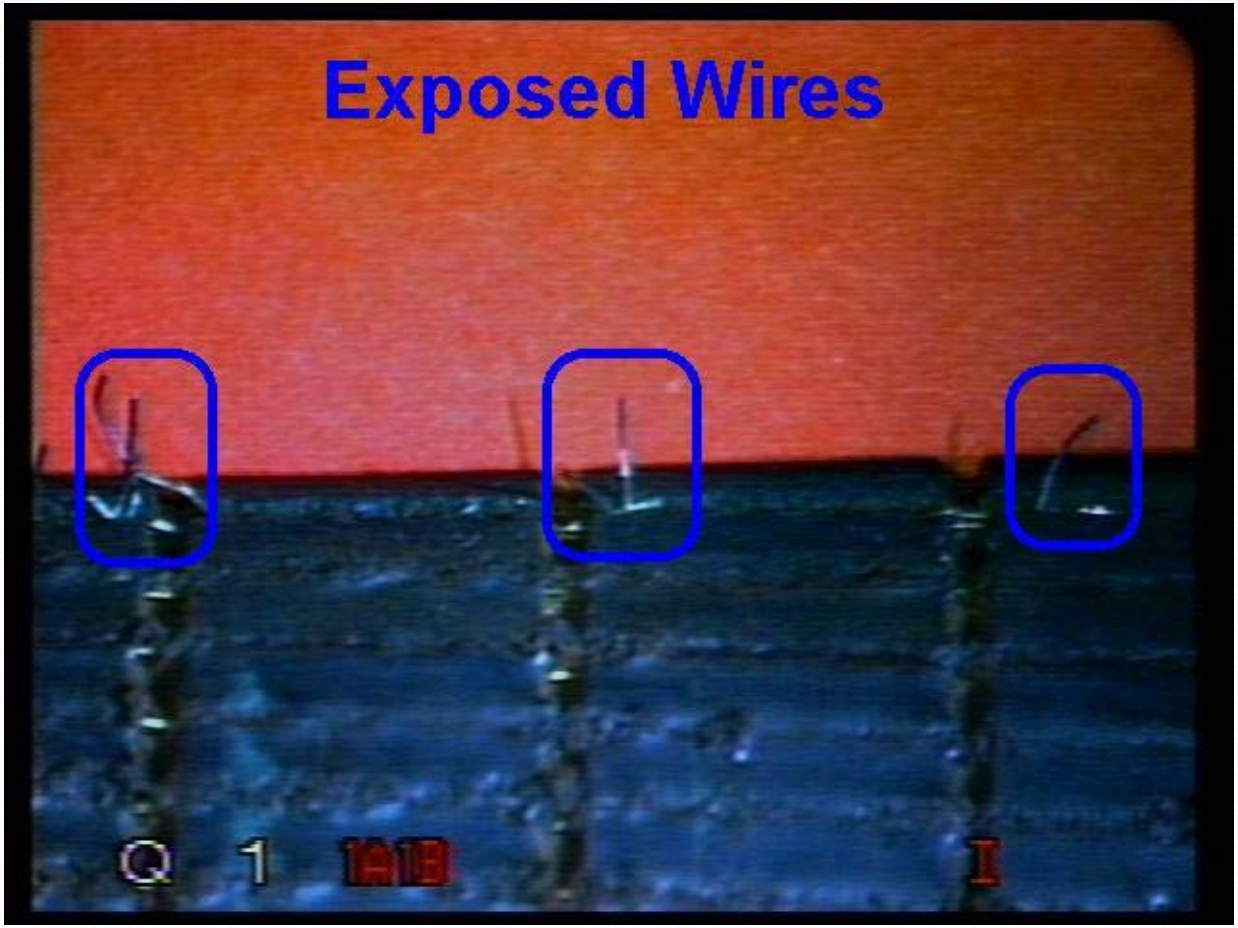
Example of Polished Coated-Steel Belt – Severe Wear



Example of Exposed Wires

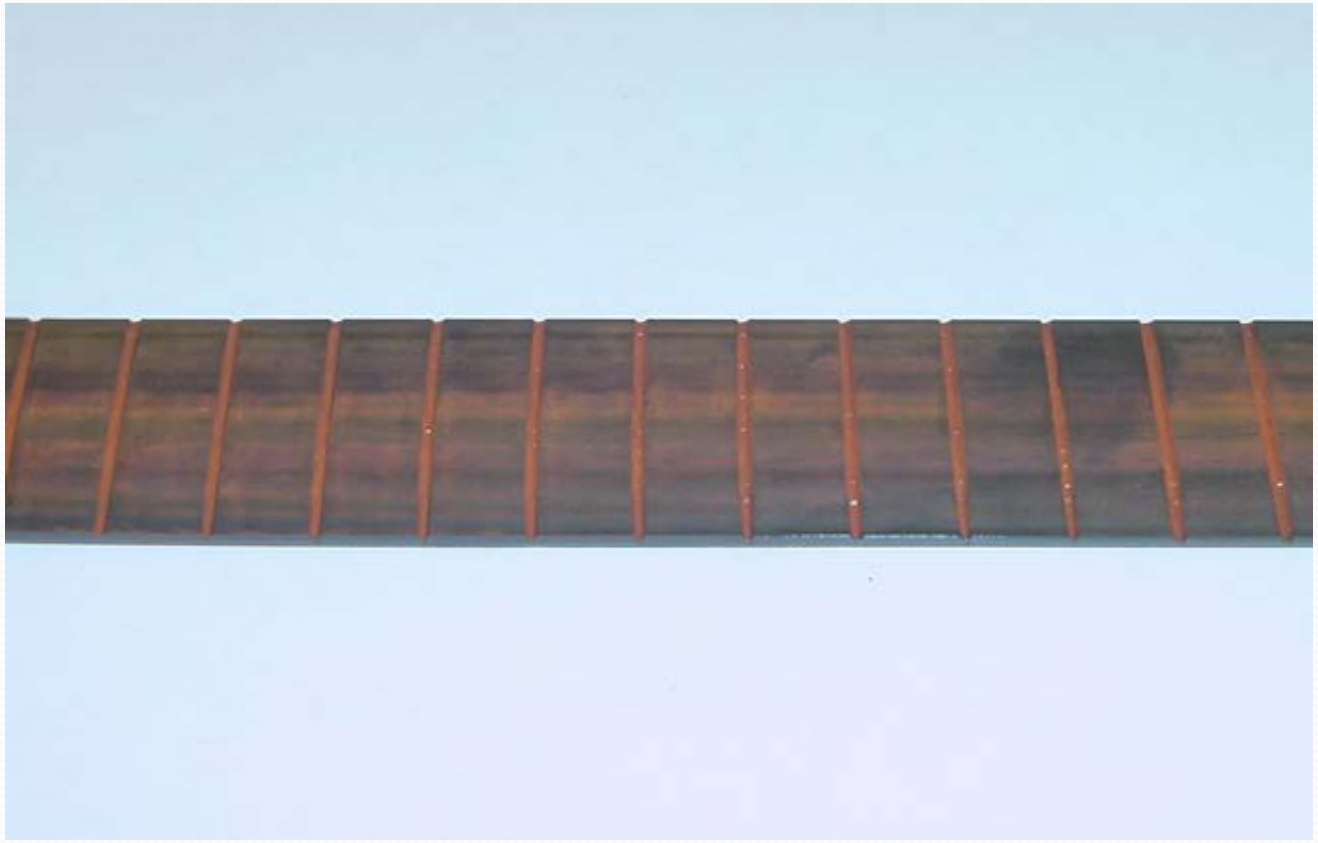


Example of Exposed Wires (Enlarged)

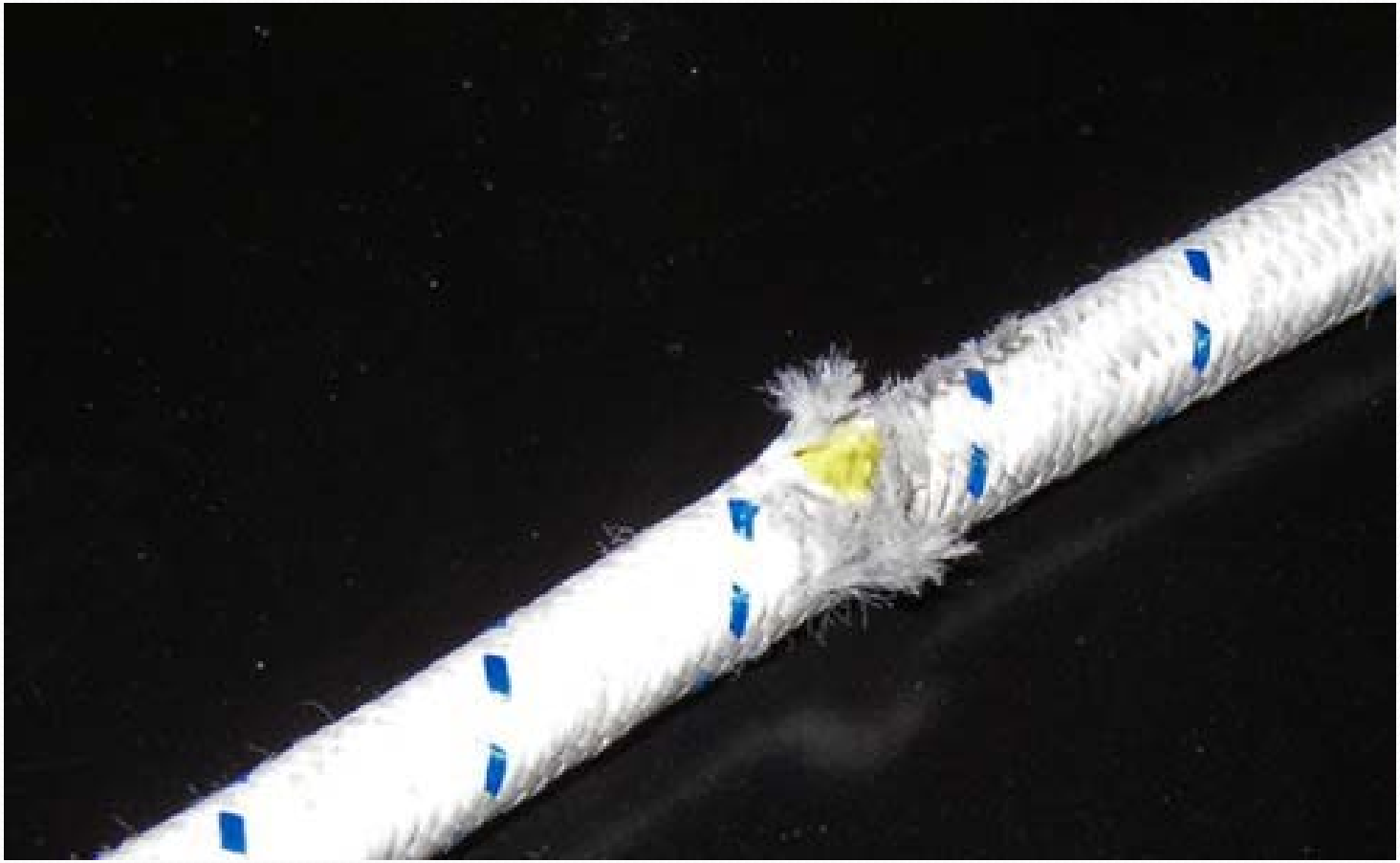


Lobby smoke within 21 ft of the centerline of each elevator door in a bank

Example of Severe Rouging



Aramid Rope/Banned

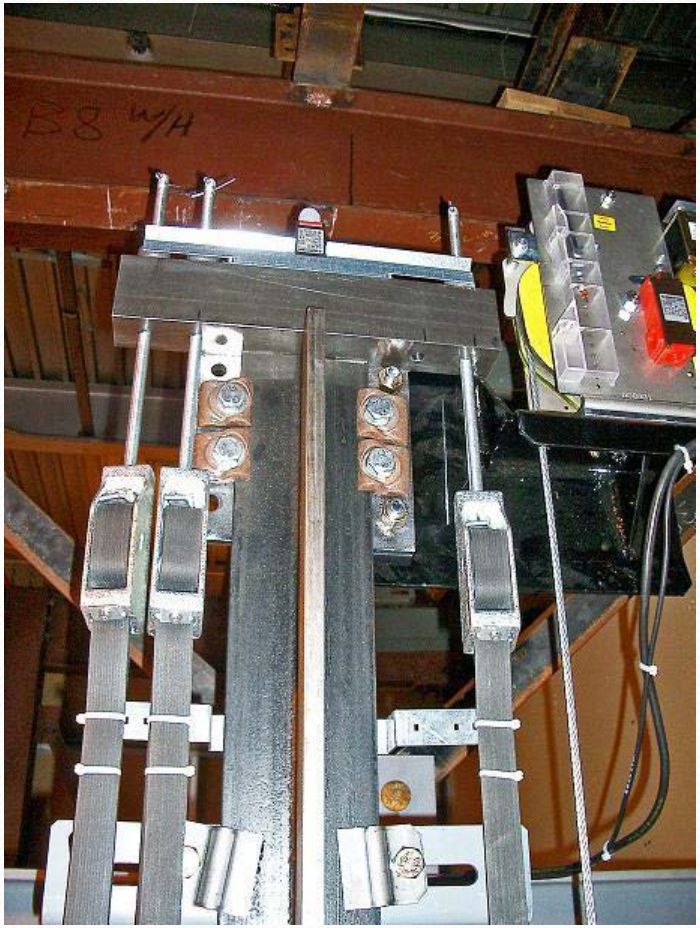


It monitors the condition of the steel cords

Safety Feature

- Broken Suspension Detection A broken suspension member is detected by the control through a normally open safety switch located on the dead end hitch of the suspension system. When any single suspension member separates (or goes slack) a mechanical actuator will trip the switch. Once actuated the car will execute a stop at the next available landing and require a manual reset of the safety function. The car will be capable to move on inspection and access operations. Also used to detect slack suspension member

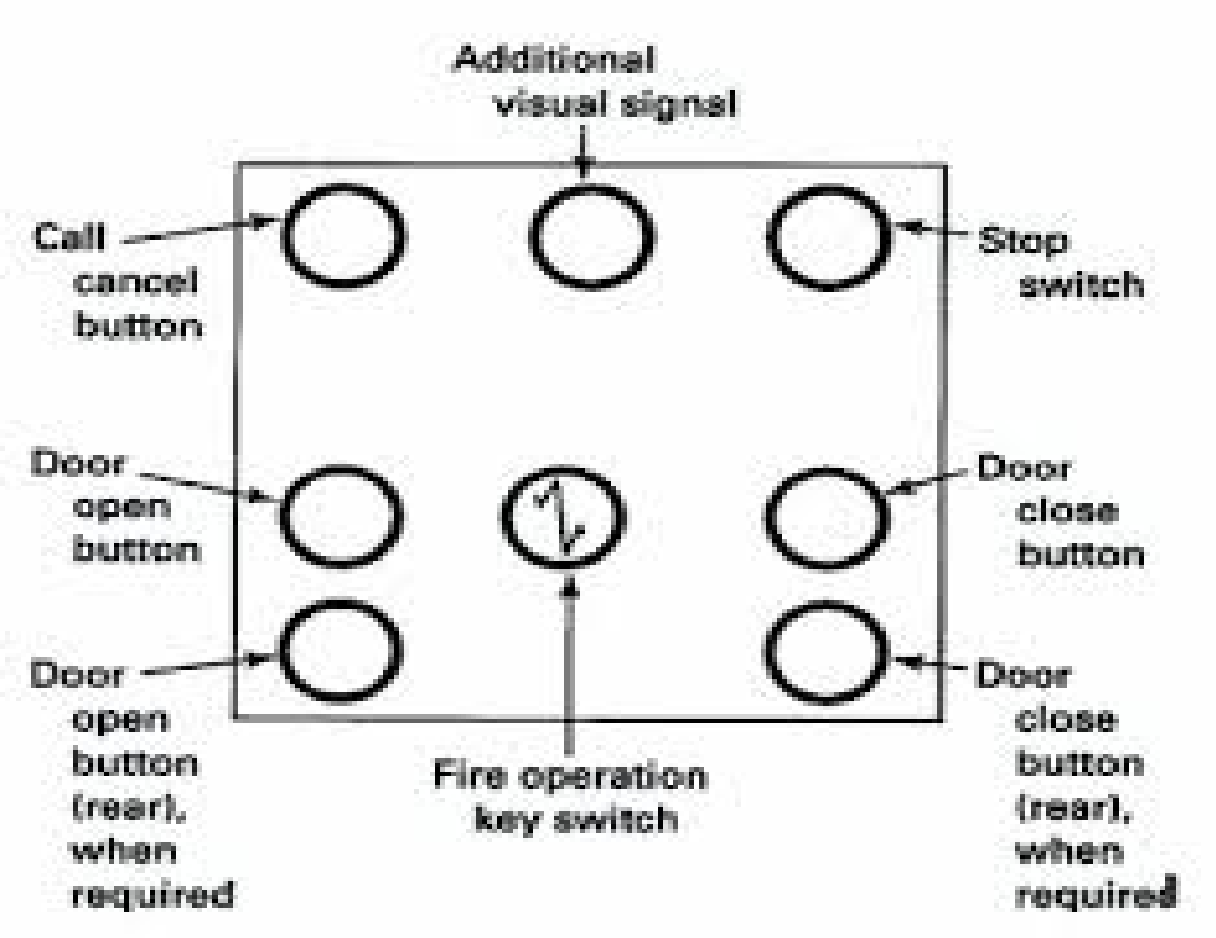
Broken Suspension Detection



Fireman's Recall

Video

Panel


Additional visual signal
Call cancel button
Stop switch
Door open button
Door close button
Door open button (rear), when required
Fire operation key switch
Door close button (rear), when required

Panel

MCP

- Maintenance Control Program

Monthly Fire Service Log

MONTHLY FIREFIGHTERS' SERVICE TEST LOG

BUILDING –

YEAR – 20__

Month	Phase I	Phase II	Comments	Mechanic
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

FEO-K1

- This key shall be of a tubular, 7 pin, style 137 construction and shall have a bitting code of 6143521

Top Of Car Fall Hazard

No railings with a distance of 12” or less

Installed in all elevators

Pit ladders.

Door restrictors.

Phones.

Emergency lighting.

Smoke Detectors

- **2.27.3.2.2** In jurisdictions enforcing the NBCC,
- smoke detectors, or heat detectors in environments not
- suitable for smoke detectors (fire alarm initiating
- devices), used to initiate Phase I Emergency Recall
- Operation, shall be installed in conformance with the
- requirements of the NBCC, and shall be located
- *(a)* at each elevator lobby served by the elevator
- *(b)* in the associated elevator machine room, machinery
- space containing a motor controller or driving
- machine, control space, or control room
- *(c)* in the elevator hoistway, when sprinklers are
- located in those hoistways
- NOTES:
- (1) 2.27.3.2.2: Smoke and heat detectors (fire alarm initiating
- devices) are referred to as fire detectors in the NBCC. Pull
- stations are not deemed to be fire detectors.
- (2) 2.27.3.2.2(b): A machinery space containing a motor controller
- or driving machine located in the elevator hoistway, or a control
- space located in the elevator hoistway requires a fire alarm
- initiating device regardless of the presence of sprinklers.

No Stop Switch/Alarm

Passenger Elevators

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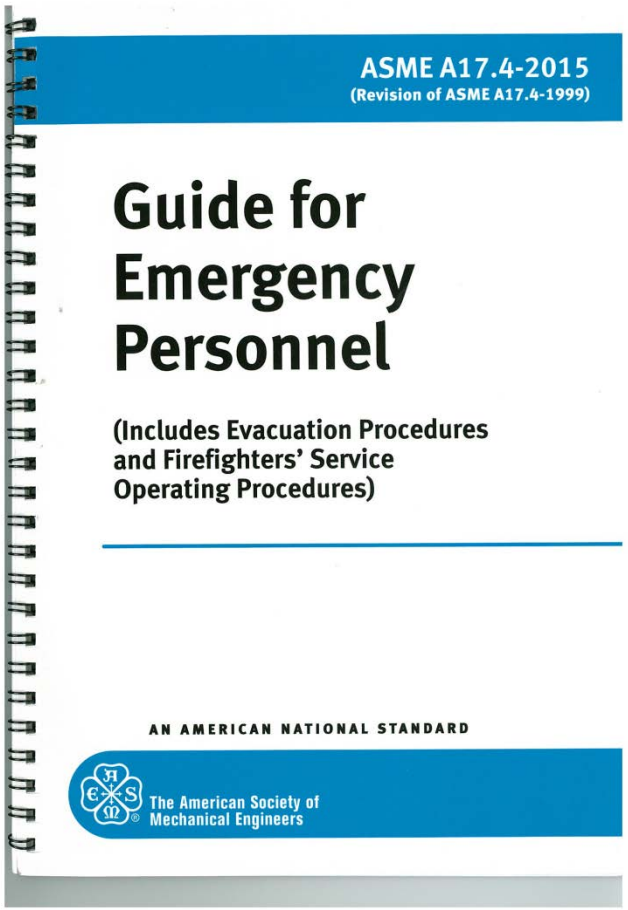

Access Hoistway

- Consequently, in light of the existing statutory and regulatory requirements, and for safety, the OSFM reminds all involved parties that only elevator personnel licensed by the State of Illinois (or those accompanied by licensed and trained elevator personnel) are permitted to access elevator pits and hoistways.

Questions