

Interpretations ASME A17.1 Safety Code for Elevators and Escalators

Appendix A

Background - ASME A17.1, an American National Standard

- First edition published January 1921
- Sponsored by American Engineering Standards Committee AESC January 1922
- Several iterations later, ANSI became incorporated in October 1969
- 17th edition of the Code issued April 30, 2004 and effective October 31, 2004

Operation

- Standards Committee meets several times each year
- Addenda published annually
- New editions, published at 3 to 5 year intervals, incorporate addenda
- Interpretations are reviewed and ratified

Subcommittees

- Regulatory Advisory Council
- National Interest Review
- B44.1/A17.5 Elevator and Escalator Electrical Equipment
- Code Coordination
- Dumbwaiter and ATD
- Earthquake Safety
- Editorial
- Electrical
- Elevators Used for Construction
- Emergency Operations
- Escalator and Moving Walk
- Evacuation Guide
- Existing Installations
- Hand and Sidewalk Elevator
- Hoistway
- Hydraulic
- Inclined Elevator
- Inspections
- International Standards
- Limited-Use/Limited-Application (LU/LA) Elevator
- Maintenance, Repair and Replacement
- Mechanical Design
- Mine Elevator
- New Technology
- Rack and Pinion and Special Purpose Personnel Elevator
- Residence Elevator
- Shipboard Elevator

Interpretations

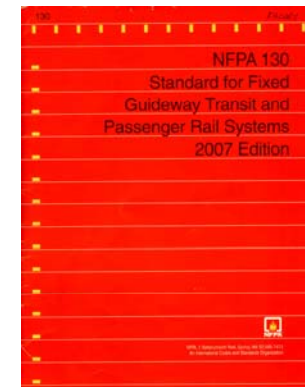
- Requests for interpretation (and proposed revisions to the Code) should be addressed to:
Secretary, A17 Standards Committee
The American Society of Mechanical Engineers
Three Park Avenue
New York, NY 10016
E-mail: infocentral@asme.org
- Format:
 1. Subject - (Cite section number and concise description)
 2. Edition - (Cite applicable edition and supplement of the Code for which the interpretation is being requested)
 3. Question - (Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. Where possible, phrase the question to permit a specific “yes” or “no” answer.)
- Specificity:
Interpretation applies only to the edition and supplement cited
- Index of Interpretations:
Maintain a complete list of interpretations by inquiry number, subject, question, answer, figures (where applicable) and approval dates.

APM Standards Committee Meeting
Tampa, Florida
February 19, 2009
gwh

Procedural Guidelines* for Formal Interpretation Process NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems

Guadalupe Murillo

February 19, 2009



*This presentation is intended to summarize the Formal Interpretation process defined by NFPA. See NFPA document "Regulations Governing Committee Projects" at www.NFPA.org for actual process requirements.

Overview

- NFPA 130 2007 is current edition
 - Consensus document, no single author.
 - Inside back cover identifies interpretation reference
- Next edition to be published in 2010
- Formal Interpretation Process defined by Section 6 of the Regulations Governing Committee Projects
 - Applies to all NFPA documents
 - Purpose is to obtain formal explanation of meaning or intent of the Technical Committee (TC) such as the NFPA 130- Technical Committee

Nature of Interpretations

- 1) Formal interpretations must be worded so as to solicit a Yes or No answer from the TC
- 2) Interpretations can be requested only on text of the current or immediate prior edition of the document (2007 or 2003)
- 3) Type of requests that can not be processed:
 - Determination of compliance
 - Includes a review of plans that require knowledge that can only be acquired as a result of on-site inspection
 - Involves text that clearly and decisively provides the requested information
 - Involves subject that were not previously considered by the TC or not addressed in the document

Interpretation Process

- **Generate Formal Interpretation Statement and direct to Council Secretary**
 - Include specific references (article section, paragraph, etc.) to a single problem
 - Identify document edition
 - Identify business interest of requestor and all parties involved
- **Council Secretary and Staff Liaison determine if request can be processed (complies with “Nature of Interpretation”)**
- **Interpretation may be rephrased by Council Secretary and sent to requestor for agreement**
- **Accepted requests submitted to ballot of the TC with the following four choices:**
 - Yes
 - No
 - Abstain
 - Formal Interpretation should not be issued based on a yes or no answer being inappropriate

Interpretation Process-Cont'd

- **Formal Interpretation requires $\frac{3}{4}$ majority agreement in favor of yes or no answer to the question**
 - Ballots may contain comments with regard to a position. These comments are transmitted to each member who may change their ballot at that time
- **If $\frac{3}{4}$ majority agreement is not obtained, item is placed on docket for processing at the next TC meeting**
- **If required agreement is obtained, all parties are notified by Staff Liaison. Interpretation will become effective and issued 20 days after notification unless an Appeal is filed.**
- **Interpretation of text of the current edition is published by Association in one of its publications and announced in an Association news release.**
- **Follow-up Action**
 - TC prepares committee proposal clarifying the text. This proposal is processed in accordance with the normal document revision cycle and processes.
 - After issuance of next edition, the Interpretation is retired.

Interpretation Request Form



Formal Interpretation Request Form

(This information is requested in Section 6 of the Regulations Governing Committee Projects)

Name: _____

Company: _____

Address: _____

Phone: _____ Fax: _____

NFPA Document No.: _____ Edition: _____ Paragraph Reference: _____

NFPA Membership # _____

Did this question arise from an actual field situation? ☐ Yes ☐ No

Please state your business interest in the matter and identify other parties involved:

Question (should be worded so that it can be answered with either yes or no):

Signature: _____ Date: _____

Mail to: Secretary, Standards Council • National Fire Protection Association
One Batterymarch Park, PO Box 9101 • Quincy, MA 02269-9101
Fax No. 617-770-3500

Actual Requests

- Since the inclusion of APMs in the scope of the NFPA 130 Standard, there have been very few Formal Interpretation Requests balloted.
- Most Interpretation Requests pertain to specific project issues and are typically disqualified or abandoned prior to ballot.
- The Raised Platform is one example of an Interpretation Request that was balloted.

Previous Interpretation Request

Formal Interpretation Ballot (FI 130-06-1)
on Paragraph 3.3.46.2 of the 2003 Edition of
**NFPA 130, *Standard for Fixed Guideway Transit
and Passenger Rail Systems***

Question: Is it the Committee's interpretation that a station, constructed at street level in the center divider with the platform raised approx 1 meter above grade level, be defined as an elevated station?

Answer: ☐ Yes ☐ No ☐ Abstain

☐ Other

☐ Formal Interpretation should not be issued based on one of the factors indicated in 6.1.4 of the NFPA Regulations, or

☐ A yes or no answer would be inappropriate.

- 6.1.4 Reasons for Not Processing. A request for an Interpretation Shall not be processed if it:
- (a) Involves a determination of compliance of a design, installation, or product or equivalency of protection
 - (b) Involves a review of plans or specifications, or requires judgment or knowledge that can only be acquired as a result of on-site inspection
 - (c) Involves text that clearly and decisively provides the requested information
 - (d) Involves subjects that were not previously considered by the TC or that are not addressed in the Document.

Actual Requests

- **The result of the example ballot was:**
 - **30 Members Eligible to Vote**
 - **3 Ballots Not Received**
 - **1 Yes**
 - **20 No**
 - **2 Abstentions**
 - **4 Other**
 - Since 20 “No” votes met the necessary 75% agreement to be issued, the TC response to the interpretation request question was formally “No”.



DEPARTMENT OF LABOR AND EMPLOYMENT

Division of Oil and Public Safety
Conveyance Section
633 17th Street, Suite 500
Denver, CO 80202-3660

(303) 318-8530
Fax (303) 318-8546

Appendix C

APM Acceptance/Periodic Inspection Report Form

OPS	State ID Number:		Plans Reviewed by:		Date Reviewed:	
	Amount Paid:		Check#:		Check Date:	
The Elevator and Escalator Certification Act, Title 9 Article 5.5-11 and 114 Conveyances shall be inspected by a State licensed third party inspector. Inspection report shall be submitted to Division of Oil and Public Safety (OPS) at the address above for review, approval and the conveyance shall be registered with OPS prior to be placed into service.						
Submit completed form (typed or printed) and Certificate fee of \$30.00 to OPS at the address above.						
Facility	Building Name:			Address:		
	City:			County:		Zip Code:
Owner	Owner/Mgmt Company:			Address:		
	City:			County:		Zip Code:
	Contact Name:		Email:	Phone:		
APM Information	State Registration ID Number:		Code Data Plate		APM Number ___ of ___	
	Unit/Contract Number:				Year Installed:	
					Year Altered:	
	Conveyance Type: Shuttle <input type="checkbox"/> Loop <input type="checkbox"/> Pinched Loop <input type="checkbox"/> Other <input type="checkbox"/>					
	Number of Stations-Boarding/Alighting Platforms-		Conveyance Manufacturer:		Drive Type: Electric <input type="checkbox"/> AC <input type="checkbox"/> Other <input type="checkbox"/> DC <input type="checkbox"/>	
Inspection Information	Inspection Type: Periodic <input type="checkbox"/> Acceptance <input type="checkbox"/> Alteration <input type="checkbox"/> Re-Inspection <input type="checkbox"/> Construction <input type="checkbox"/> Other <input type="checkbox"/> _____					
	Recommendation: Pass <input type="checkbox"/> (F) Fail <input type="checkbox"/> (T) Temp <input type="checkbox"/>			Date of Inspection:		
	Test(s) Witnessed: 1-year Yes <input type="checkbox"/> No <input type="checkbox"/>			Date of Last 1-year Safety Test:		
	3-year Yes <input type="checkbox"/> No <input type="checkbox"/>			Date of Last 3-year Safety Test:		
	Item #/Rule/Year	F/T/R(repeat)	Violations – (attach additional page(s) if necessary)			
Required Signatures	Signatures are required for Certificate of Operation processing					
	I Certify that the above inspection information is true and accurate to the best of my knowledge and belief					
	Inspection Company:		Address:		Inspector Name:	
	Licensed Inspector Signature		State License Number		Inspector Phone Number	
					Date	
	I Certify that all violations cited by the inspector (if any) have been corrected OR are under contract to be corrected. All required documentation and fees are attached. I understand that conveyance with repeat violations may not be issued a Certificate of Operation.					
	Owner/Agent Signature		Printed Name		Date	



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APM Acceptance/Periodic Inspection Report Form

All Items Marked Indicate Code Violations Periodic Inspection

1. Vehicle		2.14 Switches	<input type="checkbox"/>
1.1 Cabin Unit	<input type="checkbox"/>	2.15 Conductor Rail	<input type="checkbox"/>
1.2 Passenger Area Seats	<input type="checkbox"/>	2.16 Track End Buffer	<input type="checkbox"/>
1.3 Passenger Area Floors	<input type="checkbox"/>	2.17 Grounding Rail	<input type="checkbox"/>
1.4 Entry Doors	<input type="checkbox"/>	2.18 Signals/Signs	<input type="checkbox"/>
1.5 Chassis	<input type="checkbox"/>	2.19 Tunnel Ventilation Systems	<input type="checkbox"/>
1.6 Wheels	<input type="checkbox"/>	2.20 Dynamic Envelope	<input type="checkbox"/>
1.7 HVAC	<input type="checkbox"/>	2.21 Clearance in the Stations	<input type="checkbox"/>
1.8 Batteries and Storage Trays	<input type="checkbox"/>	2.22 Intrusion Detection	<input type="checkbox"/>
1.9 Emergency Exit Doors	<input type="checkbox"/>	2.23 Tunnel/System Lighting	<input type="checkbox"/>
1.10 Communications Equipment-vehicle to control phones	<input type="checkbox"/>	3 Queue and Holding Areas	
1.11 Interior Safety Signage	<input type="checkbox"/>	3.1 Queue Walls And Fencing	<input type="checkbox"/>
1.12 Brake Linkages and Safety Switches	<input type="checkbox"/>	3.2 Holding Areas	<input type="checkbox"/>
1.13 Elastomeric Body Mounts	<input type="checkbox"/>	3.3 Proper Queuing Techniques	<input type="checkbox"/>
1.14 Tire Pressure	<input type="checkbox"/>	3.4 Lighting In The Passenger Traffic Areas	<input type="checkbox"/>
1.15 Grab Bars, Hand Holds and Access Panels	<input type="checkbox"/>	3.5 Warning And Informational Signs	<input type="checkbox"/>
1.16 Interior Lighting	<input type="checkbox"/>	3.6 Station Door Systems	<input type="checkbox"/>
1.17 Onboard Pneumatic Or Hydraulic System and Reservoirs	<input type="checkbox"/>	3.7 Communication Equipment	<input type="checkbox"/>
1.18 Fire Extinguishers	<input type="checkbox"/>	4 Propulsion and Braking	
1.19 Emergency Electric Power and Charging System	<input type="checkbox"/>	4.1 Drive Equipment (Wiring, Power Supply etc.)	<input type="checkbox"/>
1.20 Low Level Sensing System	<input type="checkbox"/>	4.2 Emergency Drive System Unit	<input type="checkbox"/>
1.21 Suspension Components	<input type="checkbox"/>	4.3 Fire Suppression Equipment	<input type="checkbox"/>
1.22 Bearings	<input type="checkbox"/>	4.4 Gear Reducers	<input type="checkbox"/>
1.23 Cameras	<input type="checkbox"/>	4.5 Tachometric Generators And Gears	<input type="checkbox"/>
1.24 Windows	<input type="checkbox"/>	4.6 Drive Motor	<input type="checkbox"/>
1.25 Coupler	<input type="checkbox"/>	4.7 Service Brake	<input type="checkbox"/>
1.26 Smoke Detectors	<input type="checkbox"/>	4.8 Emergency Brake	<input type="checkbox"/>
2. Guideway, Track and Support Structure		4.9 Hydraulic or Pneumatic Hoses	<input type="checkbox"/>
2.1 Guideway Surface	<input type="checkbox"/>	4.10 Drive Guards	<input type="checkbox"/>
2.2 Guideway Track Fasteners	<input type="checkbox"/>	4.11 Brake Hydraulic or Pneumatic System and Manual Release Systems	<input type="checkbox"/>
2.3 Obstructions or Deterioration	<input type="checkbox"/>	4.12 Tension Rope	<input type="checkbox"/>
2.4 Lubrication	<input type="checkbox"/>	5 Electrical Equipment	
2.5 Footings and Anchor Points	<input type="checkbox"/>	5.1 Check the transportation device related distribution equipment	<input type="checkbox"/>
2.6 Wear or Contact Between the Cabin and the Guideway	<input type="checkbox"/>	5.2 GFCI's and Grounding	<input type="checkbox"/>
2.7 Track Rail and Pedestal Mounts	<input type="checkbox"/>	5.3 Lighting	<input type="checkbox"/>
2.8 Return Trough Access Ports and Covers	<input type="checkbox"/>	5.4 Conduit, Wiring, Connections and Grounding	<input type="checkbox"/>
2.9 Power Feed and Electrical Service	<input type="checkbox"/>	5.5 Control Stations	<input type="checkbox"/>
2.10 Vertical and Horizontal Guide Sheaves and Mounts	<input type="checkbox"/>	5.6 High Voltage Distribution Panels Signage	<input type="checkbox"/>
2.11 Access Platforms, Walkways, Catwalks and Railings	<input type="checkbox"/>	5.7 Control Station Indicator Lights and Displays	<input type="checkbox"/>
2.12 Track Expansion and Seismic Joints	<input type="checkbox"/>	5.8 Internal Telephones Located at the Operator Positions	<input type="checkbox"/>
2.13 Isolator Bushings	<input type="checkbox"/>	5.9 Rope Supervision Output Signal Including Derailment Function	<input type="checkbox"/>



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APM Acceptance/Periodic Inspection Report Form

5.10	Batteries and their Charging Systems	<input type="checkbox"/>	7	Operational Emergency Tests	
5.11	Perform ATC/ATP Diagnostic	<input type="checkbox"/>	7.1	Emergency Equipment and Signage on Vehicles and at Stations	<input type="checkbox"/>
5.12	Passenger Vehicle Sound and Visual Annunciation Systems	<input type="checkbox"/>	7.2	Evacuation Procedures	<input type="checkbox"/>
5.13	Lightning Protection	<input type="checkbox"/>	7.3	Operating Personnel Procedures	<input type="checkbox"/>
6	Operational Consist Tests		7.4	Tunnel Ventilation System Test	<input type="checkbox"/>
6.1	Test The Service Stop and Emergency-Stop Buttons at All Stations and on Vehicles Per Manufacturers' Instructions	<input type="checkbox"/> <input type="checkbox"/>	7.5	Parted Consist Protection	<input type="checkbox"/>
6.2	Operator Console Controls for Proper Operation	<input type="checkbox"/>	7.6	Emergency shutoff from control	<input type="checkbox"/>
6.3	Cycle The APM in Auto Mode Through at Least Three Complete Cycles (6 Trips). Record the Running Test Cycle Times. Check the Average Running Speed.	<input type="checkbox"/>	8	Records and Miscellaneous	
6.4	Test the Program(s) in the Test Mode	<input type="checkbox"/>	8.1	Maintenance and Testing of the Fire Suppression Equipment	<input type="checkbox"/>
6.5	Over-Speed Governing System	<input type="checkbox"/>	8.2	Building Fire Alarm System for Activation Devices/Audible Alarms	<input type="checkbox"/>
6.6	Acceleration and Deceleration Supervision in Both Directions	<input type="checkbox"/> ?			
6.7	Approach Supervision in Both Directions	<input type="checkbox"/> ?			
6.8	Zero Speed System	<input type="checkbox"/>			
6.9	Vehicle Radio Devices	<input type="checkbox"/>			
6.10	Over-Travel Protection System in the Stations	<input type="checkbox"/>			
6.11	Vehicle Door Open Sensors and Force Limit	<input type="checkbox"/>			
6.12	Vehicle Emergency Door System for Proper Operation	<input type="checkbox"/>			
6.13	Flat Tire Detection System	<input type="checkbox"/>			
6.14	Service Brake	<input type="checkbox"/>			
6.15	Emergency Brake and Verify Proper Stopping	<input type="checkbox"/>			
6.16	CCTV	<input type="checkbox"/>			
6.17	Station Vehicle Leveling Systems	<input type="checkbox"/>			
6.18	Fail Safe Function of the Brake System(s)	<input type="checkbox"/>			
6.19	Coupler(s) for Proper Function - Mechanical and Electrical	<input type="checkbox"/>			

APM Standards Committee NFPA 130 Report

Guadalupe Murillo
February 20, 2009



NFPA 130 Report

- NFPA 130: Standard for Fixed Guideway Transit and Passenger Rail Systems
 - Three Year Revision Cycle
 - Current 2007 Edition
 - Next Edition 2010

NFPA 130 Report

- 2010 Revision Cycle Steps/Dates
 - 1) Call for Proposals-Closed
 - 2) Report of Proposals (ROP)-Completed
 - 3) Report of Comments (ROC) Review Meeting - Conducted October 19-22, 2008
 - 4) ROC to be published and posted 2/20/2009
 - 5) NFPA Association Meeting for Document: June 7-10, 2009
 - 5) Standards Council Issuance: September 2009

NFPA 130 Report

- Eight Task Groups (Recap)
 - Disbanded after ROC in October 2008 as part of normal document revision cycle
 - TG-1: Manual of Style (SI units)
 - TG-2: Emergency Exiting
 - TG-3: Ventilation
 - TG-4: Vehicles
 - TG-5: Facilities – Fire Alarms and Suppression
 - TG-6: Emergency Procedures
 - TG-7: Control Systems Reliability*
 - TG-8: Fire Heat and Fire Smoke Release Rates*

NFPA 130 Report

- Significant Activities
 - Five Comments were placed on HOLD for the next edition of NFPA 130 (additional work required)
 - ROC 130-Log#2 (ROP Log#130-61) Automatic Sprinkler Systems
 - ROC 130-Log#65 (ROP Log#130-61) Same as above
 - ROC 130-Log#74 (ROP Log#130-21) Engineering Analysis vs. Fire Hazard Analysis
 - ROC 130-Log#89 (ROP Log#130-67) Traction Power Requirements
 - ROC 130-Log#108 (ROP Log#130-67) Reorganization of Chapter 6
 - See ROC when published for additional detail

NFPA 130 Report

- Significant Activities (Continued)
 - TIA 942 (Tentative Interim Amendment) pertaining to a reported error in vehicle material category “Elastomers” was rejected.
 - NFPA 130/2007 8.4.1.2, states “The ASTM E 662, *Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials*, maximum test limits for smoke emission (specific optical density) shall be based on both the flaming and nonflaming modes”. Currently this note applies to all materials except floor covering, elastomers and wire and cable.
 - By adding the reference to 8.4.1.2 to elastomers and floor covering the requirements would be consistent with the rest of the materials in the table.
 - It appears the change had technical merit but was not considered to be an emergency nature to constitute a TIA.

NFPA 130 Report

- TIA 942 (Tentative Interim Amendment) Actual Vote Results

- 30 eligible

- » 2 Ballots not returned

- » 18 Affirmative

- » 8 Negative

- » 2 Abstain

- TIA Log 942 did NOT achieve the necessary $\frac{3}{4}$ majority of 20 votes

30 eligible to vote – 2 ballots not returned – 2 abstentions
= $26 \times 0.75 = 19.5$ rounded up to 20

- Will be addressed in next document revision cycle