ANSI/ASSE A10.5 – 2013
Safety Requirements for Material Hoists

American National Standard for Construction and Demolition Operations
The information and materials contained in this publication have been developed from sources believed to be reliable. However, the American Society of Safety Engineers (ASSE) as secretariat of the ANSI accredited A10 Committee or individual committee members accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations. By publication of this standard, ASSE or the A10 Committee does not ensure that adherence to these recommendations will protect the safety or health of any persons, or preserve property.
American National Standard
Construction and Demolition Operations

Safety Requirements for Material Hoists

Secretariat

American Society of Safety Engineers
1800 East Oakton Street
Des Plaines, Illinois  60018-2187

Approved February 28, 2013

American National Standards Institute, Inc.
Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review, directly and materially affected interests have reached substantial agreement. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he/she has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstance give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretation shall be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.
Foreword
(This Foreword is not a part of American National Standard A10.5 – 2013.)

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor and equipment manufacturers. For the convenience of users, a list of existing and proposed standards in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

A10.1 Pre-Project & Pre-Task Safety & Health Planning
A10.2 Safety, Health and Environmental Training (under development)
A10.3 Powder-Actuated Fastening Systems
A10.4 Personnel Hoists and Employee Elevators
A10.5 Material Hoists
A10.6 Demolition Operations
A10.7 Transportation, Storage, Handling and Use of Commercial Explosives and Blasting Agents
A10.8 Scaffolding
A10.9 Concrete and Masonry Construction
A10.10 Temporary and Portable Space Heating Devices
A10.11 Personnel and Debris Nets
A10.12 Excavation
A10.13 Steel Erection
A10.15 Dredging
A10.16 Tunnels, Shafts and Caissons
A10.17 Safe Operating Practices for Hot Mix Asphalt (HMA) Construction
A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
A10.19 Pile Installation and Extraction Operations
A10.20 Ceramic Tile, Terrazzo, and Marble Work
A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities (under development)
A10.22 Rope-Guided and Non-Guided Workers’ Hoists
A10.23 Safety Requirements for the Installation of Drilled Shafts (under development)
A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
A10.25 Sanitation in Construction
A10.26 Emergency Procedures for Construction Sites
A10.27 Hot Mix Asphalt Facilities
A10.28 Work Platforms Suspended from Cranes or Derricks
A10.29 Aerial Platforms in Construction (under development)
A10.31 Digger-Derricks
A10.32 Personal Fall Protection Used in Construction and Demolition Operations
A10.33 Safety and Health Program Requirements for Multi-Employer Projects
A10.34 Public Protection
A10.37 Debris Nets
A10.38 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
A10.39 Construction Safety and Health Audit Program
A10.40 Reduction of Musculoskeletal Problems in Construction
A10.41 Equipment Operator and Supervisor Qualifications and Responsibilities (under development)
A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
A10.43 Confined Spaces in Construction (under development)
A10.44 Lockout/Tagout in Construction
A10.46 Hearing Loss Prevention
A10.47 Highway Construction Safety
A10.48 Communication Tower Erection (under development)
A10.49 Control of Health Hazards (under development)

One purpose of these standards is to serve as guides to governmental authorities having jurisdiction over subjects within the scope of the A10 Committee standards. If these standards are adopted for governmental use, the reference of other national codes or standards in individual volumes may be changed to refer to the corresponding regulations.

Revisions: The A10 Committee welcomes proposals for revisions to this standard. Revisions are made to the standard periodically (usually five years from the date of the standard) to incorporate changes that appear necessary or desirable, as demonstrated by experience gained from the application of the standard. Proposals should be as specific as possible, citing the relevant section number(s), the proposed wording and the reason for the proposal. Pertinent documentation would enable the A10 Committee to process the changes in a more-timely manner.

Interpretations: Upon a request in writing to the Secretariat, the A10 Committee will render an interpretation of any requirement of the standard. The request for interpretation should be clear, citing the relevant section number(s) and phrased as a request for a clarification of a specific requirement. Oral interpretations are not provided.

No one but the A10 Committee (through the A10 Secretariat) is authorized to provide any interpretation of this standard.

Approval: Neither the A10 Committee nor American National Standards Institute (ANSI) approves, certifies, rates or endorses any item, construction, proprietary device or activity.

Appendices: Appendices are included in most standards to provide the user with additional information related to the subject of the standard. Appendices are not part of the approved standard.

Checklists: Checklists included in A10 standards may be copied and used in non-commercial settings only.

Committee Meetings: The A10 Committee meets twice per year. Persons wishing to attend a meeting should contact the Secretariat for information.

Standard Approval: This standard was processed and approved for submittal to ANSI by the American National Standards Committee on Safety in Construction and Demolition Operations, A10. Approval of the standard does not necessarily imply (nor is it required) that all Committee members voted for its approval. At the time ANSI approved this standard, the A10 Committee had the following members:
<table>
<thead>
<tr>
<th>Organization Represented</th>
<th>Name of Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident Prevention Corporation</td>
<td>Frank Burg, CSP, P.E.</td>
</tr>
<tr>
<td>Aegis Corporation</td>
<td>Michael Serpe, CSP</td>
</tr>
<tr>
<td>Alstom Power</td>
<td>Judith Burkart, CSP</td>
</tr>
<tr>
<td>American Insurance Services Group</td>
<td>Robert Renney, CSP</td>
</tr>
<tr>
<td>ASCE - Construction Institute Committee</td>
<td>Ted P. Sharp, CSP</td>
</tr>
<tr>
<td>American Society of Safety Engineers</td>
<td>Thad Nosal, CSP</td>
</tr>
<tr>
<td>American Wind Energy Association</td>
<td>James G. Borchardt, CSP, CPE, CRIS</td>
</tr>
<tr>
<td>Associated Builders and Contractors, Inc.</td>
<td>Harlan Fair, CSP</td>
</tr>
<tr>
<td>Associated General Contractors of America, The</td>
<td>Ken Shorter, CSP, ARM, TCDS</td>
</tr>
<tr>
<td>Association of Union Constructors, The</td>
<td>A. David Brayton, CSP, CPC</td>
</tr>
<tr>
<td>A-Z Safety Resources, Inc.</td>
<td>Michele Myers Mihelic</td>
</tr>
<tr>
<td>Barton-Malow Company</td>
<td>Dennis W. Eckstine</td>
</tr>
<tr>
<td>Black &amp; Veatch</td>
<td>Ralph Riley, CSP</td>
</tr>
<tr>
<td>Bovis Lend Lease</td>
<td>Chris Williams, CSP</td>
</tr>
<tr>
<td>Building &amp; Construction Trades Department</td>
<td>Charlie Bird, CSP</td>
</tr>
<tr>
<td>CPWR - Center for Construction Research &amp; Training</td>
<td>Kevin Cannon, CSP</td>
</tr>
<tr>
<td>Capital Safety Group</td>
<td>Wayne Creasap, II</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Rusty Brown, CSP</td>
</tr>
<tr>
<td>Cole-Preferred Safety Consulting, Inc.</td>
<td>Jane F. Williams, CPE, CCA</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Mark Klimbal, CSP, ARM</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>Clayton Shafer, CSP</td>
</tr>
<tr>
<td>Edison Electric Institute</td>
<td>Richard F. King, CSP</td>
</tr>
<tr>
<td>Elevator Industry Preservation Fund</td>
<td>John H. Johnson, CSP</td>
</tr>
<tr>
<td>Ellis Fall Safety Solutions</td>
<td>Joel C. Pickering, CSP</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Michael Lentz, CSP</td>
</tr>
<tr>
<td>CPWR - Center for Construction Research &amp; Training</td>
<td>Pete Stafford, Ph.D., CIH</td>
</tr>
<tr>
<td>Capital Safety Group</td>
<td>Jim Platner, Ph.D., CIH</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Chris Trahan, CIH</td>
</tr>
<tr>
<td>Cole-Preferred Safety Consulting, Inc.</td>
<td>Pete Stafford, Ph.D., CIH</td>
</tr>
<tr>
<td>Construction &amp; Realty Safety Group, Inc.</td>
<td>Scott C. Casebolt, P.E.</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>J. Thomas Wolner, P.E.</td>
</tr>
<tr>
<td>Edison Electric Institute</td>
<td>Tim Sirofchuck, CSP</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Kurt Dunmire, CSP</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>Barry Cole, CSP</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Philip L. Colleran, CSP</td>
</tr>
<tr>
<td>Construction &amp; Realty Safety Group, Inc.</td>
<td>Ron Lattanzio, CSP</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>Anthony Merisola, CSP</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Patrick Brennan, CSHM, CSSM</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>R. Lee Reed, Jr., P.E., CSHM, CSSM</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Charles Kelly, CSHM</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>Gary Birchall, CSP</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Ronald Probasco, CSP</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>Garry Kosinski, CSP</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>Michael D. Morand, CSHM</td>
</tr>
<tr>
<td>E. I. Dupont de Nemours &amp; Company</td>
<td>J. Nigel Ellis, Ph.D., CSP, CPE, P.E.</td>
</tr>
<tr>
<td>ECI Safety Services Co.</td>
<td>John Whitty, P.E.</td>
</tr>
</tbody>
</table>
Gilbane Building Co.                                      Anthony O’Dea, CSP, CHST
Richard D. Hislop                                        Charles Praul, Jr., CSP
Independent Electrical Contractors, Inc.                Richard Hislop
Institute of Makers of Explosives                      Shawn Bradfield
Insulators International Union                           John P. Masarick
International Association of Bridge, Structural,      Bob Baird
Ornamental and Reinforcing Iron Workers                Lon D. Santis
International Brotherhood of Boilermakers               Susan JP Flanagan
International Brotherhood of Electrical Workers         Terry Lynch
International Brotherhood of Teamsters                  Jim E. Lapping, MS, P.E., CSP
International Safety Equipment Association              Steven Rank
International Union of Bricklayers & Allied Craftworkers Robert Migliaccio, Sr.
International Union of Operating Engineers              Brian Loftus
Jack L. Mickle & Associates                               Bridget Connors
Laborers’ International Union of North America          James Tomaseski
Marsh USA, Inc.                                         LaMont Byrd, CIH
Maryland Occupational Safety & Health                   Julie Plavka, CIH
Mechanical Contractors Association of America           Cristine Fargo
National Association of Home Builders                    Michael Kassman, CHST
National Association of Railroad Safety                 Gerard Scarano
Consultants & Investigators                             Barbara McCabe
National Electrical Contractors Association             Steve Brown
National Institute for Occupational Safety & Health     Jack Mickle, Ph.D., P.E.
National Railroad Contractors &                        Steve Stock, P.E., PLS
Maintenance Association                                 Scott Schneider, MS, CIH
National Roofing Contractors Association                Walter A. Jones, MS, CIH
National Society of Professional Engineers              Timothy Bergeron, CSP
Operative Plasterers and Cement Masons                  Miscelle Vanreusel
International Association                               Eric Uttenreither
Powder Actuated Tool Manufacturer’s Institute           Peter Chaney, MS, CSP
Power Consultants, Incorporated                         Dennis Langley
Daniel M. Paine                                         Robert Matuga
Phoenix Fabricators and Erectors, Inc.                  Dylan Hardison
Robert E. Clouse, CSP, CHST                              Lewis Barbe, P.E., CSP, CRSP
Pharmaceutical Manufacturers Institute                  Michael J. Johnston
Powder Actuated Tool Manufacturer’s Institute           Jerry Rivera
Power Consultants, Incorporated                         Thomas G. Bobick, Ph.D., P.E., CSP, CPE
Power Consultants, Incorporated                         Matt Gillen, CIH
Powder Actuated Tool Manufacturer’s Institute           Jeffrey D. Meddin, CSP, CHEP, CHCM
Pharmaceutical Manufacturers Institute                  Harry Dietz
Phoenix Fabricators and Erectors, Inc.                  Tom Shanahan
Power Consultants, Incorporated                         E. Ross Curtis, P.E., DFE
Phoenix Fabricators and Erectors, Inc.                  Paul Swanson, P.E.
Pharmaceutical Manufacturers Institute                  Deven Johnson
Phoenix Fabricators and Erectors, Inc.                  Rob Mason
Phoenix Fabricators and Erectors, Inc.                  Daniel M. Paine
Phoenix Fabricators and Erectors, Inc.                  Barbara Paine
Phoenix Fabricators and Erectors, Inc.                  Robert E. Clouse, CSP, CHST
Phoenix Fabricators and Erectors, Inc.                  Frank Massey
Phoenix Fabricators and Erectors, Inc.                  James A. Borchers
Phoenix Fabricators and Erectors, Inc.                  David Jablonski
Phoenix Fabricators and Erectors, Inc.                  David Goldsmith
Professional Safety Consultants, Inc.  
Property Casualty Insurers Association of America  
Ryland Group, Inc., The  
Scaffolding, Shoring & Forming Institute  
Shafer Safety Solutions, LLC  
Sheet Metal & Air Conditioning Contractors’ National Association  
Sheet Metal Workers International Association  
SPA, Incorporated  
Turner Construction Company  
United Association of Plumbers and Pipefitters  
United Brotherhood of Carpenters and Joiners of America  
United Union of Roofers, Waterproofers and Allied Workers  
U.S. Department of the Army – Corps of Engineers  
U.S. Department of Energy  
West Virginia University Extension Service  
Winchester Homes Inc.  
ZBD Constructors (Zurn Industries)

Subgroup A10.5 had the following members:

Garry Kosinski (Chair)  
Richard Hislop (Liaison)  
Robert Brewton  
Thomas Chambers  
Mike D’Alessio  
J. Nigel Ellis  
Charles Ernstes  
Richard Gregory  
Terry Haug  
Greg Janda  
Peter Juhren  
John Quackenbush (In memoriam)

Camille Villanova  
Jim E. Lapping, MS, P.E., CSP  
Anthony Brown  
John Rabovsky, MS, CSP, ARM  
Daniel Lavoie, CSP, ARM  
Bob Masterson, CSP  
Chris Johnson  
Carmen Shafer, CSP, CHST, CRIS  
Mike McCullion, CSP, ARM  
Joe Visgaitis  
Charles Austin, MS  
Stanley Pulz, CSP, P.E.  
Richard B. Loucks, Ph.D., P.E.  
Cindy L. DePrater, ALCM  
Paul Huntley  
Laurie Shadrick  
Bruce Dantley  
William Irwin  
Thomas L. Kavicky  
John Barnhard  
Brian Becker, MS  
Ellen B. Stewart, CSP  
Leslie Bermudez  
Joseph Hopkins  
Brandon Takacs, CSHM  
Mark Fullen, Ed.D., CSP  
Thomas Traeger  
Larry Freiert  
Greg Thompson, CSP  
Jeffrey D. Meddin, CSP, CHEP, CHCM  
Jim E. Lapping, MS, P.E., CSP  
Jeffrey Meddin, CSP, CHEP, CHCM  
Michael D. Morand  
John O’Connor  
Todd Sharpe  
James White
<table>
<thead>
<tr>
<th>Contents</th>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>1.1 Scope</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>1.2 Purpose</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>1.3 Exceptions</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2. Related Standards</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2.1 Related American National Standards</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2.2 Other Related Standards</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>3. Definitions</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>4. Requirements for Hoist Towers</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>4.1 Design</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>4.2 Construction</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>4.3 Initial Inspection</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>4.4 Daily Inspection</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>4.5 Monthly Inspection</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>4.6 Quarterly Inspection</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>4.7 Inspection After Height Extension</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>4.8 Post Incident Inspection</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>5. Design and Construction of Foundations</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>6. Erection</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>6.1 Vertical Alignment</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>6.2 Guide Rails</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>6.3 Grounding and Bonding</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>6.4 Hoist-Tower Enclosures</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>6.5 Hoistway Doors or Gates</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>6.6 Tower Height</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>6.7 Bottom Enclosure</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>6.8 Segment Connections</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>6.9 Diagonal Bracing</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>6.10 Supervision of Erection and Dismantling</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>6.11 Shutdown for Service</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>7. Guying and Bracing</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>7.1 Guys or Braces</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>7.2 Wire Rope Guys</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>7.3 Temporary Removal or Adjustment</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>8. Cantilever Towers</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>8.1 Exceptions</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>8.2 Guying or Bracing</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>8.3 Erecting or Dismantling</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>9. Requirements for Inside Hoists</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>9.1 Enclosure</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>9.2 Covering at Cathead</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>10. Hoist Platforms and Cages</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>10.1 Prohibition of Riders</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>10.2 Rolling Equipment</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>10.3 Overhead Protection</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>10.4 Hinged Covers</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>10.5 Securing Long Material</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>10.6 Slip-Resistant Floors</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>
16.4 Operation and Maintenance Manual ........................................... 25
17. Protection of Operator ................................................................. 25
  17.1 Overhead Protection ................................................................. 25
  17.2 Enclosure .............................................................................. 25
  17.3 Prohibition of Open-Flame Heaters ........................................ 25
  17.4 Heater Requirements ............................................................... 25
  17.5 Lighting .............................................................................. 25
  17.6 Glass .................................................................................. 25
18. Signal Systems ............................................................................ 25
  18.1 Hand Signals ........................................................................ 25
  18.2 Communication .................................................................... 25
  18.3 Electrical System Protection .................................................. 26
19. Indicators ................................................................................... 26
  19.1 Position Indicators ................................................................. 26
20. Electric Motors .......................................................................... 26
  20.1 Motor Installations ................................................................. 26
  20.2 Switches ................................................................................ 26
  20.3 Control Panels ...................................................................... 26
  20.4 Emergency Electrical Cutoff ................................................ 26
21. Landings and Runways ............................................................... 26
  21.1 Design ............................................................................... 26
  21.2 Railings ............................................................................... 26
  21.3 Overhead Protection .............................................................. 26
  21.4 Barricades .......................................................................... 26
  21.5 Working Platforms ................................................................. 27
  21.6 Housekeeping .................................................................... 27
  21.7 Prohibition of Material Storage ............................................. 27
  21.8 Surfaces ............................................................................. 27
22. Capacity Statement and Design .................................................. 27
  22.1 Design ............................................................................... 27
  22.2 Booms and Auxiliary Equipment Loads ................................. 27
  22.3 Steel Tower Design ............................................................... 27
23. Maintenance and Installation Records ......................................... 27
  23.1 Maintenance of Records ......................................................... 27
  23.2 Installation Records ............................................................... 27
  23.3 Records Availability ............................................................. 27
  23.4 Qualified Person(s) ................................................................. 27
  23.5 Replacement of Defective Parts ........................................... 28
24. Revision of American National Standards Referred to in This Document... 28

Table 1: Groove Radii for New and Reconditioned Sheave Grooves .... 29
Table 2: Minimum Ratio of Rope Diameter to Sheave Tread Diameter ... 29
1. GENERAL

1.1 Scope. This standard applies to material hoists used to raise or lower materials during construction, alteration or demolition. It is not applicable to the temporary use of permanently installed personnel elevators as material hoists.

This standard shall not apply to:

3. Manlifts constructed and operated in conformance with ANSI/ASME A90.1, Safety Standard for Belt Manlifts.
4. Transport platforms and overhead winch systems are not subject to this standard.

1.2 Purpose. This standard defines safety requirements for the use and operation of material hoists used in construction.

1.3 Exceptions. In cases of practical difficulties, unnecessary hardships or new developments, exceptions to the literal requirements shall be permitted by the enforcing authority to allow the use of other devices or methods, but only when it is clearly established that equivalent protection is thereby obtained.

2. RELATED STANDARDS

2.1 Related American National Standards. This standard is intended for use in conjunction with the following American National Standards (see Section 24 for additional information):

- ANSI/ASSE A10.4, Safety Requirements for Personnel Hoists on Construction and Demolition Sites.
- ANSI/ASSE A10.8, Scaffolding Safety Requirements.
- ANSI/ASSE A10.10, Safety Requirements for Temporary and Portable Space Heating Devices and Equipment.
- ANSI/ASSE A10.32, Personal Fall Protection Used in Construction and Demolition Operations.
- ANSI Z97.1 Standard - Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test
- ANSI Z535.2, Environmental and Facility Safety Signs.
- ANSI/ASME A90.1, Safety Standard for Belt Manlifts.
- NFPA 10, Standard for Portable Fire Extinguishers.
- NFPA 70, National Electrical Code.