



AMERICAN NATIONAL STANDARD

ANSI/ASSE A10.31-2006

*Safety Requirements,
Definitions and
Specifications for
Digger Derricks—*

*American National Standard
for Construction and
Demolition Operations*

ANSI/ASSE A10.31-2006



AMERICAN SOCIETY OF
SAFETY ENGINEERS

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ANSI®
ANSI A10.31 – 2006

**American National Standard
Construction and Demolition Operations**

**Safety Requirements, Definitions and
Specifications for Digger Derricks**

Secretariat

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

Approved April 27, 2006

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Foreword (This Foreword is not a part of American National Standard A10.31-2006.)

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 Planning for Construction Safety and Health (under development)
- 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 Floor Holes, Wall Openings, Stairways, and Other Unprotected Edges
- A10.19 Pile Installation and Extraction Operations (under development)
- A10.20 Ceramic Tile, Terrazzo, and Marble Work
- A10.22 Rope-Guided and Non-Guided Workers' Hoists
- A10.23 Back Injury Prevention Programs (under development)
- A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
- A10.25 Sanitation in Construction (under development)
- A10.26 Emergency Procedures for Construction Sites (under development)
- A10.27 Hot Mix Asphalt Facilities
- A10.28 Work Platforms Suspended from Cranes or Derricks
- A10.29 Aerial Lifts in Construction (under development)
- A10.30 Construction Workplace Security
- A10.31 Digger-Derricks
- A10.32 Fall Protection Systems for Construction Industry Users
- A10.33 Safety and Health Program Requirements for Multi-Employer Projects
- A10.34 Public Protection
- A10.35 High Pressure Hydro Blasting (under development)
- A10.36 Railroad Construction Safety (under development)
- 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 (under development)
- 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 (under development)
A10.46 Hearing Loss Prevention (under development)
A10.47 Highway Construction Safety (under development)
A10.48 Communication Tower Erection (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 paragraph 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 paragraph 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.

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

Committee Meetings: The A10 Committee meets twice a 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 this standard was published, the A10 Committee had the following members:

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AMERICAN NATIONAL STANDARD A10.31 SAFETY REQUIREMENTS, DEFINITIONS AND SPECIFICATIONS FOR DIGGER DERRICKS

1. SCOPE, PURPOSE, REQUIREMENTS, APPLICATION, AND EXCEPTIONS

owners, renters, lessors or lessees and users of their respective responsibilities.

1.1 Scope.

1.3 Requirements. The requirements of this standard shall be met or exceeded.

1.1.1 Equipment Covered. This standard applies to special multipurpose vehicle-mounted machines, commonly known as digger derricks. These machines are primarily designed to accommodate components that dig holes, set poles and position materials and apparatus.

1.4 Application. All sections of this standard apply only to those digger derricks manufactured after the effective date of this revision.

1.1.2 Equipment Excluded. Excluded from this standard are general-purpose cranes, designed only for lifting service and machines primarily designed for digging holes.

1.5 Exceptions. In cases of practical difficulty or undue hardship, the responsible authority may grant exceptions to the literal requirements of this standard or permit the use of other devices or methods, but only when it is clearly evident that personnel and equipment protection is assured.

1.1.3 Uniform Specification Data. This standard establishes uniform requirements for design, specifications and dimensions.

2. REFERENCED AND RELATED STANDARDS

1.1.4 Responsibilities. This standard defines the respective responsibilities of the manufacturer, dealer, installer, owner, renter, lessor or lessee, user and operator of the digger derrick.

2.1 Referenced American National Standards. This standard is intended for use in conjunction with the following American National Standards. When these referenced standards are superceded by a revision approved by the American National Standards Institute Inc., the revision shall apply.

1.2 Purpose. This standard applies to the establishment of criteria for design, manufacture, testing, inspection, installation, maintenance, use, training and operation of vehicle mounted digger derricks to achieve the following objectives:

- (1) Prevention of personal injuries and accidents.
- (2) Uniformity in ratings.
- (3) Understanding by manufacturers, dealers, installers, maintenance personnel, operators,

ANSI/SIA A92.2, *Vehicle Mounted Elevating and Rotating Aerial Devices*

ANSI Z535.1 through 535.5, *Safety Signs and Colors*

ANSI/AWS D1.1/D1.1M, *Structural Welding Code - Steel*

ANSI/AWS D1.2/D1.2M, *Structural Welding Code - Aluminum*