

# ANSI/ASSP A10.42-2000 (R2017)

## Rigging Qualifications and Responsibilities in the Construction Industry

The American Society of Safety Engineers (ASSE) is now the American Society of Safety Professionals (ASSP). ASSP continues to be the Secretariat for the committee producing this standard and continues to hold the copyright to this standard. There is no change to the content and requirements in the standard. The only change is on the cover indicating the organizational name change of the standards developing organization from ASSE to ASSP.



AMERICAN SOCIETY OF  
**SAFETY PROFESSIONALS**



PREVIEW ONLY

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.

**ANSI®**  
**ANSI/ASSE A10.42 – 2000 (R2017)**

**American National Standard  
Construction and Demolition Operations**

**Safety Requirements  
for Rigging Qualifications and Responsibilities**

Secretariat

**American Society of Safety Engineers**  
520 N. Northwest Highway  
Park Ridge, Illinois 60068

**Approved October 5, 2017**

**American National Standards Institute, Inc.**

## **American National Standard**

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, substantial agreement has been reached by directly and materially affected interests. 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 should 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 requires 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.

Published December 2017 by

**American Society of Safety Engineers**  
**520 N. Northwest Highway**  
**Park Ridge, Illinois 60068**  
**(847) 699-2929 • [www.asse.org](http://www.asse.org)**

Copyright © 2017 by American Society of Safety Engineers  
All Rights Reserved.

No part of this publication may be reproduced  
in any form, in an electronic retrieval system or  
otherwise, without the prior written permission  
of the publisher.

Printed in the United States of America

## Foreword (This Foreword is not a part of American National Standard A10.42-2000 (R2017).)

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 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
- 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
- A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
- A10.43 Confined Spaces in Construction and Demolition Operations
- A10.44 Lockout/Tagout in Construction
- A10.46 Hearing Loss Prevention
- A10.47 Highway Construction Safety
- A10.48 Communication Structures
- A10.49 Control of Health Hazards

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:

Richard King, CSP, Chair  
Steven Rank, Vice Chair  
Timothy R. Fisher, CSP, CHMM, ARM, CPEA, Secretary  
Lauren Bauerschmidt, MS Engr, CSP, Assistant Secretary  
Jennie Dalesandro, Administrative Technical Support

**Organization Represented**

**Name of Representative**

3M	Raymond A. Mann Mike Boraas
A-Z Safety Resources, Inc. Accident Prevention Corporation	Jane F. Williams, CPEA, CCA Frank Burg, CSP, P.E. Terry Krug, CSP, CIH
AGC of America	Michael McCaffrey Kevin Cannon
American Insurance Services Group	Thad Nosal James G. Borchardt, CSP, CPE, CPSM, CRIS
American Society of Civil Engineers	John O'Connor, P.E. Harlan Fair, P.E.
American Society of Safety Engineers	Ken Shorter, CSP, ARM, TCDS A. David Brayton, CSP, CPC
American Wind Energy Association	Christopher Daniels Michele Myers Mihelic
American Work Platform Training, Inc. APT Research, Inc. Associated Builders and Contractors, Inc.	Dennis W. Eckstine Saralyn Dwyer Stephen Wiltshire, MSc Greg Sizemore
Barton Malow Company	Jeffrey Oliver, CSP, CHST Mark Haggemaker
Black & Veatch	Richard F. King, CSP John H. Johnson, CSP
Building & Construction Trades Department	Chris Cain, CIH Gary Gustafson
Century Elevators	Paula Manning Eric Schmidt, P.E.
Clark Construction Group Cole-Preferred Safety Consulting, Inc. Construction & Realty Safety Group, Inc.	Kurt Dunmire, CSP, CHST Barry Cole Ron Lattanzio Frank Marino
CPWR - Center for Construction Research & Training	Bruce Lippy, Ph.D., CIH, CSP Babak Memarian
Edison Electric Institute	Jonathan Kerns Adam Frederick
Elevator Industry Work Preservation Fund	Michael D. Morand James Demmel
Ellis Fall Safety Solutions, LLC	J. Nigel Ellis, Ph.D., P.E., CSP, CPE John T. Whitty, P.E.
Engineering Systems, Inc.	David Ahearn, P.E. Edward J. Tuczak, P.E.
Fluor Corporation	Michael Weatherred, CSP Jim Bates, CSP
Gilbane Building Co.	Robert Hinderliter, ASP Thomas Trauger

Richard D. Hislop

Independent Electrical Contractors, Inc.

Innovative Safety, LLC

Institute of Makers of Explosives

International Association of Bridge, Structural,  
Ornamental and Reinforcing Iron Workers

International Association of Heat & Frost  
Insulators & Allied Workers

International Brotherhood of Boilermakers

International Brotherhood of Electrical Workers

International Brotherhood of Teamsters

International Safety Equipment Association

International Union of Bricklayers & Allied Craftworkers

International Union of Operating Engineers

Kiewit Power Constructors Co.

Laborers' International Union of North America

Lamar Advertising

Lendlease Corporation

Liberty Mutual

Marsh LLC

Maryland Occupational Safety & Health

Mechanical Contractors Association of America

Miller & Long Concrete Construction

National Association of Home Builders

National Association of Railroad Safety  
Consultants & Investigators

National Electrical Contractors Association

National Institute for Occupational Safety & Health

National Railroad Construction &  
Maintenance Association

National Roofing Contractors Association

National Society of Professional Engineers

Richard Hislop

Shawn Bradfield

Paul Dolenc

Jerry Rivera

Daniel M. Paine

Barbara Paine

Susan JP Flanagan

Ronald Thomas

Steven Rank

Tim Keane

Mark Garrett

Bridget Connors

David Mullen

Dan Gardner

LaMont Byrd, CIH

Asher Tobin

Cristine Fargo

Michael Kassman, CHST

Gerard Scarano

Christopher Tremi

Barbara McCabe

Rusty Brown, CSP

Dave Hinz

Walter A. Jones, MS, CIH

Travis Parsons

Chuck Wigger, CSP

Beth Phelps

Joel Pickering, CET, CHMM

Michael Lentz

Daniel P. Lavoie, CSP, ARM

Stan Williams, ARM, CHST

Timothy Bergeron, CSP

Mischelle Vanreusel

Michael Daughaday

Peter Chaney, MS, CSP

Dennis Langley

Frank Trujillo

Alex Rodas, CHST

Robert Matuga

Chelsea Vetick

Lewis Barbe, P.E., CSP, CRSP

Michael J. Johnston

Wesley Wheeler

Thomas G. Bobick, Ph.D., P.E., CSP, CPE

G. Scott Earnest, Ph.D., P.E, CSP

Jeffrey D. Meddin, CSP, CHEP, CHCM

Harry Dietz

Tom Shanahan

E. Ross Curtis, P.E., DFE, F.ASCE, F.NSPE

Paul Swanson, P.E.



NESTI, Inc.

Operative Plasterers and Cement Masons  
International Association  
PATMI

Phoenix Fabricators and Erectors, Inc.

Power Consultants, Incorporated  
Professional Safety Consultants, Inc.

Safety Environmental Engineering, Inc.  
Scaffold & Access Industry Association

Shafer Safety Solutions, LLC  
Sheet Metal & Air Conditioning Contractors'  
National Association  
SMART Union

SPA Incorporated  
Stock Enterprises  
The Association of Union Constructors

Turner Construction Company

U.S. Army Corps of Engineers

U.S. Department of Energy

United Association

United Brotherhood of Carpenters and  
Joiners of America  
United Union of Roofers, Waterproofers &  
Allied Workers  
West Virginia University Extension Service

ZBD Constructors, Inc.

Michael Hayslip, P.E., CSP  
Jack Madeley, P.E., CSP

Deven Johnson  
James A. Borchers  
Craig Pratt  
Luke Humphrey  
Frank Massey  
David Goldsmith  
Jim E. Lapping, MS, P.E., CSP  
Kathryn Stieler  
Matthew Murphy  
Ted Beville  
DeAnna Martin  
Carmen Shafer, CSP, CHST

Mike McCullion, CSP, ARM  
Randall Krocka  
Charles Austin, MS  
Stanley Pulz, CSP, P.E.  
Steve Stock, P.E., PLS  
Wayne Creasap, II  
Kathleen Dobson, CSP, CHST, STS.C  
Cindy L. DePrater, ALCM  
Abdon Friend, CSP  
Muhammed El-Zoghbi  
Bonnie Rathbun, CIH, CET  
Terry Meisinger  
Maurice Haygood  
Cheryl Ambrose, CHST, OHST  
Rich Benkowski  
William Irwin  
Dale Shoemaker

Keith J. Vitkovich  
Brandon Takacs, CSHM  
Mark Fullen, Ed.D., CSP  
Greg Thompson, CSP  
Jeffrey D. Meddin, CSP, CHEP, CHCM

**Independent Experts & Observers:**

Alliance of Hazardous Materials Professionals  
J.A. Montgomery Risk Control

Lockton Companies  
National Association of Tower Erectors

U.S. Department of Labor – OSHA

Warfel Construction Company

Carl Heinlein, CSP, ARM, CRIS  
Eric Voight  
Ken Bogdan  
Jason Scollin, CSP, ASP, MS, STC-C  
John P. Jones  
Kathryn Stieler  
Dean McKenzie  
Scott Ketcham  
Jeffrey I. Pierce  
Kevin Stoltzfus

**Subgroup A10.42 had the following members:**

Steven Rank (Chair)  
Rich Benkowski  
Barry Cole  
Wayne Creasap, II  
Kathleen Dobson, CSP, CSHT, STS.C  
Jack Duley  
Mark Garrett  
Luke Humphrey  
Jim Lapping, MS, P.E., CSP  
Michael Nordstrom  
Beth O'Quinn  
Daniel Paine  
Travis Parsons  
Chip Pocock  
Stanley Pulz, CSP, P.E.  
Dale Shoemaker  
Alan Simmons  
Frank Trujillo  
Chuck Wigger, CSP

PREVIEW ONLY

<b>Contents</b>	<b>SECTION.....</b>	<b>PAGE</b>
	1. General .....	11
	1.1 Scope .....	11
	1.2 Purpose .....	11
	1.3 Modifications and Exemptions .....	11
	1.4 Limitations .....	11
	1.5 Mandatory and Advisory Rules .....	11
	1.6 Equivalent.....	11
	2. Definitions .....	11
	3. Performance Requirements.....	13
	3.1 General.....	13
	3.2 Critical Operations .....	13
	3.3 Critical Operations .....	14
	3.4 Requirement for a Qualified Rigger.....	14
	4. Operational Requirements.....	14
	4.1 General Requirements.....	14
	4.2 Signaling.....	14
	4.3 Suspended Loads.....	14
	5. Personnel Qualification and Training.....	15
	5.1 General.....	15
	5.2 Qualifications .....	15
	5.3 Training .....	15
	5.4 Retraining.....	17
	5.5 Recordkeeping .....	17
	Appendices:	
	Appendix A - Standard Hand Signals for Controlling Crane Operations ....	18
	Appendix B - Suggested Guidelines for Developing a Job-Specific Procedure for a Critical Load Movement.....	20
	Appendix C - Suggested Forklift Signals .....	22

## AMERICAN NATIONAL STANDARD A10.42 SAFETY REQUIREMENTS FOR RIGGING QUALIFICATIONS AND RESPONSIBILITIES

### 1. GENERAL

**1.1 Scope.** This standard establishes minimum criteria of knowledge and performance requirements for a qualified rigger in the construction industry.

**1.2 Purpose.** This standard is designed to assist in achieving reasonable safety of all persons and materials during the process of, or as the result of, rigging, lifting or moving of loads.

**1.3 Modifications and Exemptions.** In cases of practical difficulties, unnecessary hardships or new developments, exceptions to the literal requirements may be granted by the enforcing authority to permit the use of other devices or methods, but only when it is clearly indicated that the equivalent protection is thereby secured.

**1.4 Limitations.** This standard does not apply to the training required to be qualified as an operator of powered equipment. This standard does not apply to transportation of loads or maintenance or repair of powered or manual hoists, cranes, winches or other hoisting equipment.

NOTE: While the qualified rigger is required to know the basic principles and limits of lifting and hoisting equipment, they are expected to rely on qualified operators, mechanics, suppliers, engineers, managers and others involved for valid information, and for competent performance by these other persons in their respective roles. For instance, a rigger may be responsible to determine loads and the farthest radius of a pick, but then must rely on a crane operator to know the safe crane capacity for the configuration and setup of that crane. This principle also applies to operators of hoists, winches, helicopters, etc. Similarly, if a rigger

determines that a 5-ton picking beam is needed, they can rely on a manager, an engineer who provides specifications or a supplier who provides a product for the rigger's use.

**1.5 Mandatory and Advisory Rules.** Mandatory rules of this standard are characterized by the word "shall." If a rule is of an advisory nature, it is indicated by the word "should," or is stated as a recommendation or commentary. The Appendixes are advisory.

**1.6 Equivalent.** The word "equivalent" in this standard shall mean alternative materials, designs or features that will provide an equal degree of strength and safety.

### 2. DEFINITIONS

**2.1 ANSI.** American National Standards Institute

**2.2 Attachment.** A device other than conventional forks or load backrest extension, mounted permanently or removably on the elevating mechanism of a fork truck for handling the load. Popular types are fork extension clamps, rotating devices, side shifters, load stabilizers, rams and booms.

**2.3 Cable.** A term loosely applied to wire ropes, wire strands, manila ropes and electrical conductors.

**2.4 Clip.** A fitting used to clamp two parts of wire rope (also known as wire rope clip, wire rope clamp).

**2.5 Competent Person.** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous or