

ASME B30 & P30 Developments



Host:

Mike Parnell

ITI President/CEO

ASME B30 Vice Chair (Cranes & Rigging)

ASME P30 Chair (Lift Planning)

The views expressed in this presentation are that of ITI and are not necessarily the views of the ASME or any of its committees



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We Rig It Right!



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- Construction
- DOD
- DOE
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- Hydro
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- Maritime
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- Nuclear
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- Pulp & Paper
- Railroad
- Shipbuilding
- Wind Energy



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ITI SHOWCASE WEBINAR SERIES



Past Presentations:

- Cranes, Rigging & Your Organization
- Effective Crane & Rigging Training Methods for Your Employees
- Heavy Intermodal Lift & Transport – Engineering Considerations
- ITI Master Rigger Course: Interactive Demo

Today's Presentation:

ASME B30 & P30 Developments

(Friday, September 7, 2012 - 1pm EST)

Upcoming Presentations:

10 Audit Points for Your Crane & Rigging Operations: An HSE Perspective

Tackling the Challenges of Training Site Supervisors, Lift Directors, and Other Leaders

MIKE PARNELL – ABOUT YOUR HOST

Mr. Parnell has a wealth of knowledge regarding cranes, rigging, and lifting activities throughout a variety of industries

- 30+ years learning about wire rope, rigging, load handling, and lifting activities
- Vice Chair of the ASME B30 Main Committee which sets the standards in the US for cranes and rigging
- Chair of the ASME P30 Main Committee which sets the standards for lift planning

ASME standards are also adopted by many countries around the world



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TODAY'S AGENDA

- ASME B30.1 through B30.30
- New Volumes Under Development
- Major Standard Updates, 2008-to-Date
- Interpretation of Standards
- ASME P30 Lift Planning



QUICK TIPS

- Interactive Discussion
- Long-Term Mindset – Think about Expansion, Consolidation, and Preparing for Tomorrow
- Questions are Welcomed
- Utilize the Control Panel to:
 - - Type Questions into the Chat Box
 - - Answer Poll Questions
- Q & A Session after Presentation



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Talking:

Questions

Welcome to the Webinar! We will begin momentarily. While you're waiting, feel free to visit <http://iti.com> to learn about ITI.

Type question here.

Send

Cranes, Rigging, and Your Organization with
ITI President Mike Parnell
Webinar ID# 595-462-098

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WHAT IS ASME?

- American Society of Mechanical Engineers
- The ASME B30 standards are developed under procedures accredited by American National Standards Institute
- A collection of 30 volumes which address safety issues related to equipment usage in the workplace



WHAT EQUIPMENT IS COVERED IN ASME B30?

- Jacks, Rollers, etc
- Overhead Cranes
- Tower Cranes
- Mobile Cranes
- Drum Hoists
- Floating Cranes
- Slings & Hooks
- Underhung Hoists
- Handling Loads from Rotorcraft
- Storage/Retrieval Machines
- Side Boom Tractors
- Stacker Cranes
- Cableways
- BTH Lifting Devices

WHAT EQUIPMENT IS COVERED IN ASME B30?

- Manually Operated Lever Hoists
- Articulating Boom Cranes
- Personnel Lifting Systems
- Container Cranes
- Scrap Handlers
- Rigging Hardware
- Material Placement Systems
- Balance Lifting Units
- Self-Erecting Tower Cranes
- Ropes

WHAT'S NEW?



It takes patience to write a National Standard?



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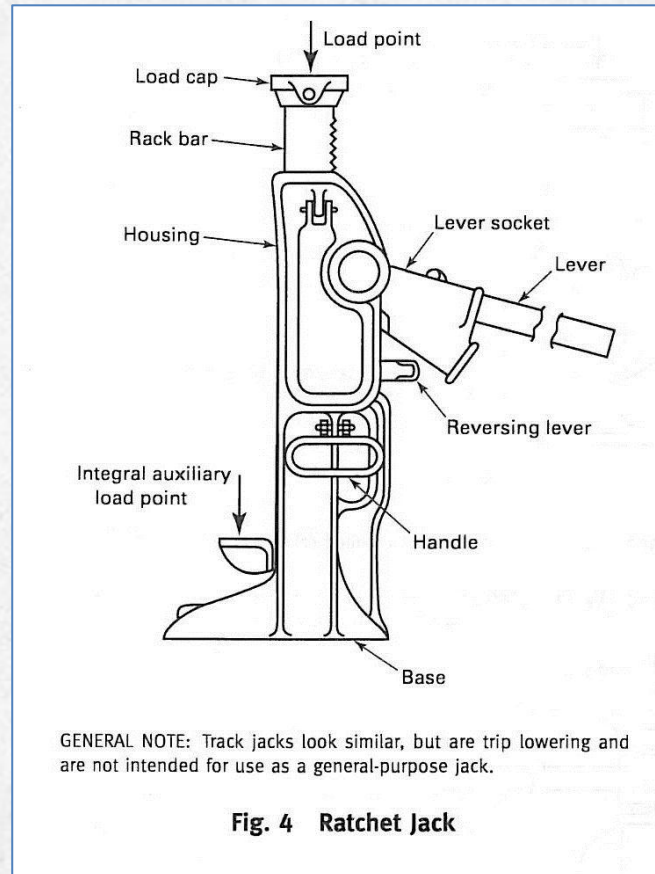
Now You Made Me Mad

Now You Made Me Mad

www.funnyfreepics.com

B30.1 - 2009

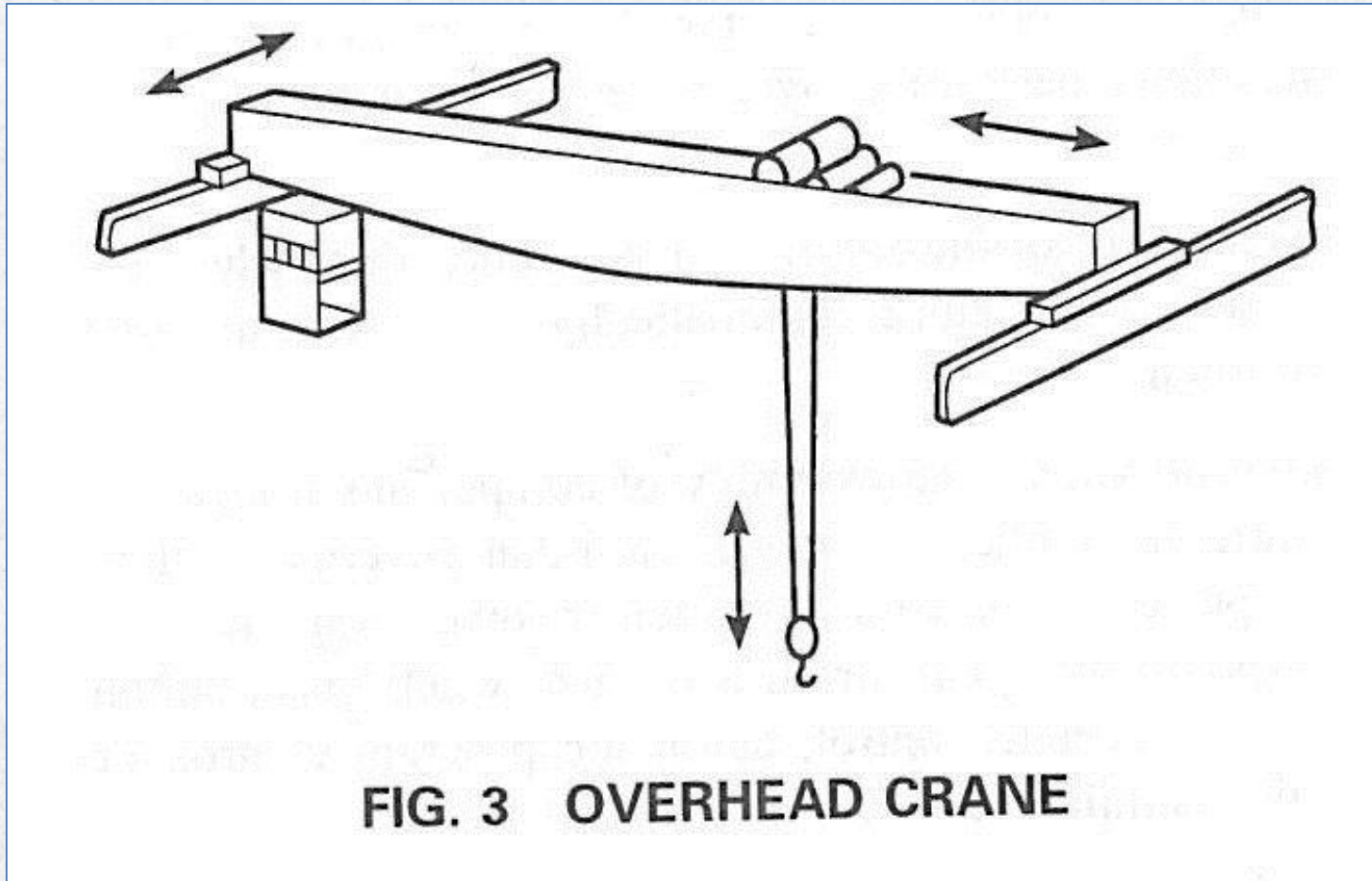
JACKS, ROLLERS, AIR CASTERS, AIR LIFTING BAGS, THGS



B30.1 – 2009 JACKS

- Mechanical and Hydraulic Jacks
- Air Lifting Bags
- Air Casters
- Industrial Rollers
- Telescopic Hydraulic Gantry Systems
- Considering adding Strand Jacks
- Next publication date 2014

B30.2 – 2011 OVERHEAD and GANTRY CRANES



B30.2 – 2011 OVERHEAD and GANTRY CRANES

- Defined/Inserted Minimum Breaking Force
- Clarified labeling required for Basic Controls/Master Switches
- Maintenance separated from Inspection and Testing adding Chapter 4, Maintenance Training and Maintenance
- Operational Training requirement
- Management Responsibilities
- Next revision 2015

B30.2 – 2011 **OVERHEAD and GANTRY CRANES**

Request for Interpretation

Q: Do the load test requirements in Sec. 2-2.2.2.2 address the load test of the underlying support structure?

B30.2 – 2011 **OVERHEAD and GANTRY CRANES**

Request for Interpretation

Q: Do the load test requirements in Sec. 2-2.2.2.2 address the load test of the underlying support structure?

A: No.

B30.2 – 2011 OVERHEAD and GANTRY CRANES

Request for Interpretation

Q: Can the load test be conducted using test weights equal to 100% of the rated capacity?

B30.2 – 2011 OVERHEAD and GANTRY CRANES

Request for Interpretation

Q: Can the load test be conducted using test weights equal to 100% of the rated capacity?

A: Yes.

B30.2 – 2011 **OVERHEAD and GANTRY CRANES**

Request for Interpretation

Q: If the test weights are 100% of the RC can the load rating be certified at 100% of the test weights/rated capacity?

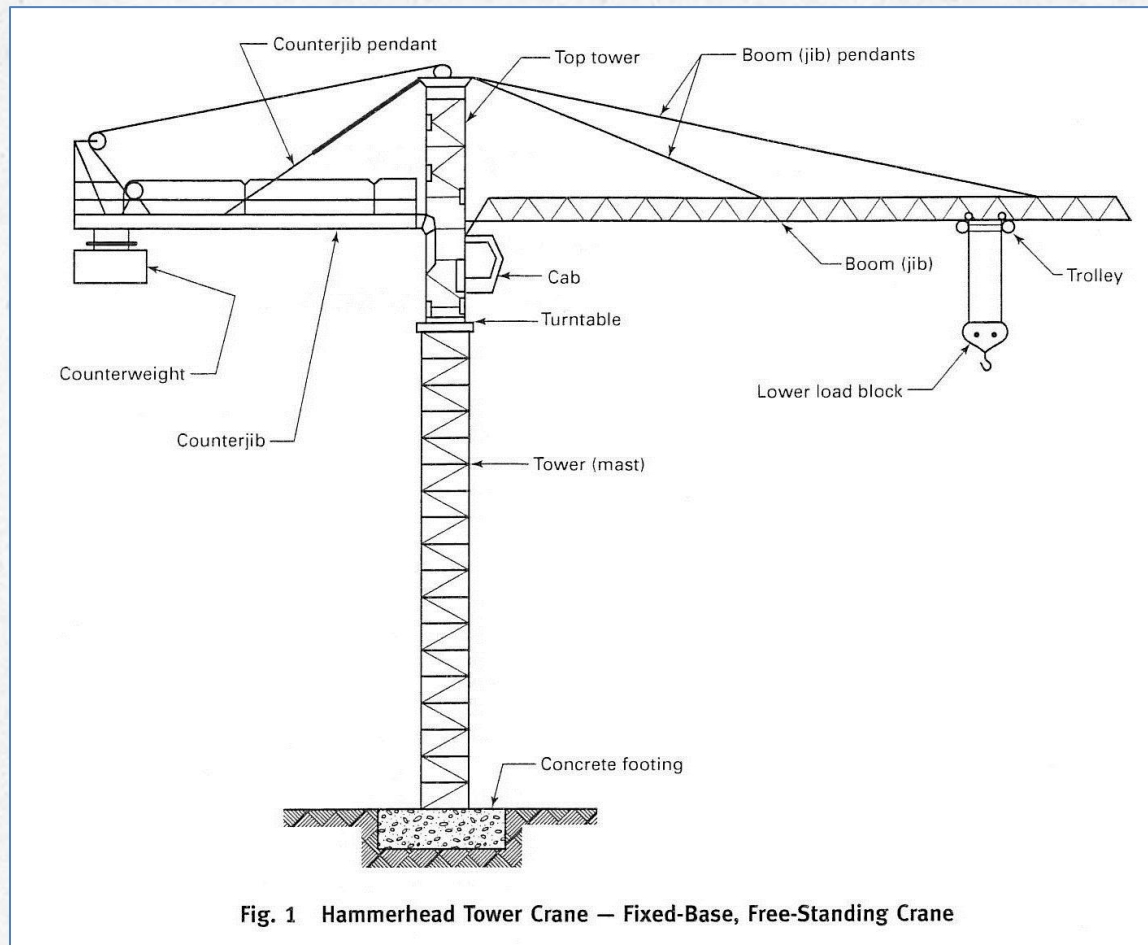
B30.2 – 2011 OVERHEAD and GANTRY CRANES

Request for Interpretation

Q: If the test weights are 100% of the RC can the load rating be certified at 100% of the test weights/rated capacity?

A: ASME does not certify any activity, however the load rating can be verified at 100% of the rated capacity.

B30.3 – 2009 TOWER CRANES



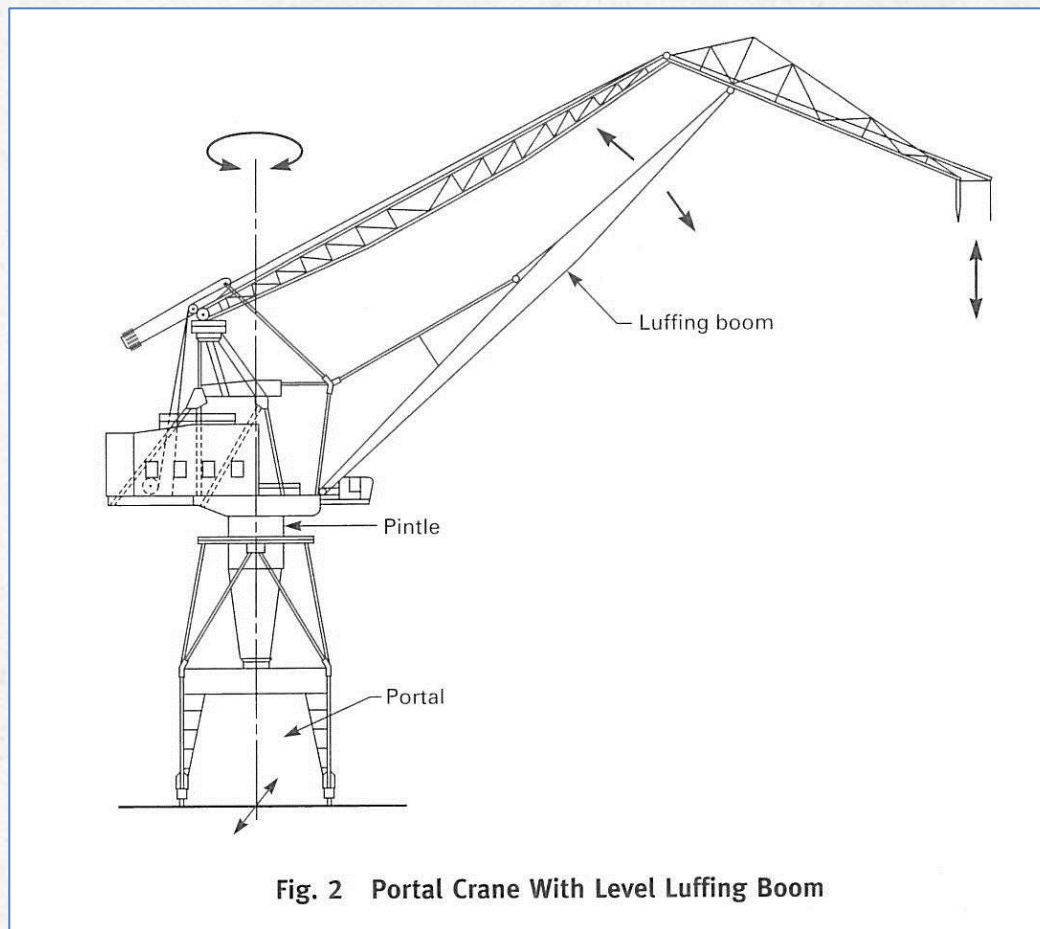
B30.3 – 2009 TOWER CRANES

- Responsibilities section under consideration
- Signal system upgrade
- Next Revision 2012

TOWER CRANES subcommittee to develop new signal and communication system.



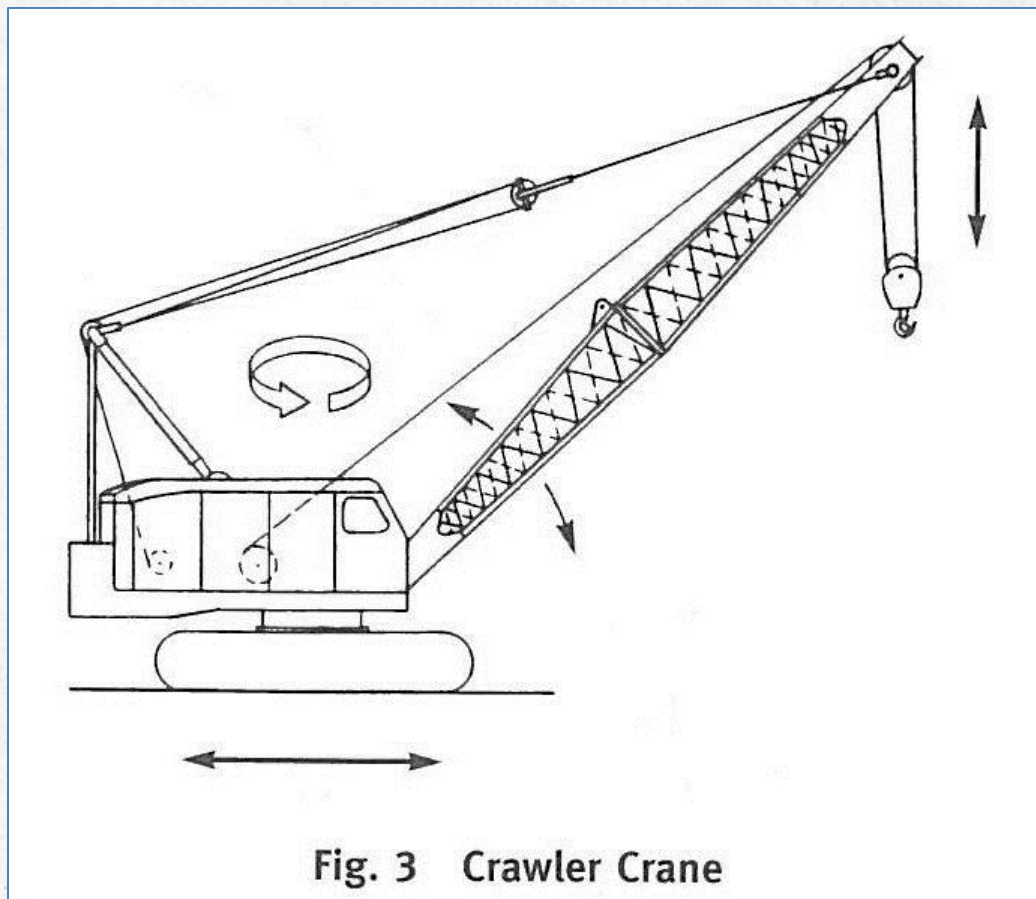
B30.4 – 2010 PORTAL and PEDESTAL CRANES



B30.4 – 2010 PORTAL and PEDESTAL CRANES

- Responsibilities, PM program, planned for 2015
- Tower Crane removed from this Volume
- Defined “Boom Stop” and “Buffer/Bumper”
- Expanded Operator Qualifications

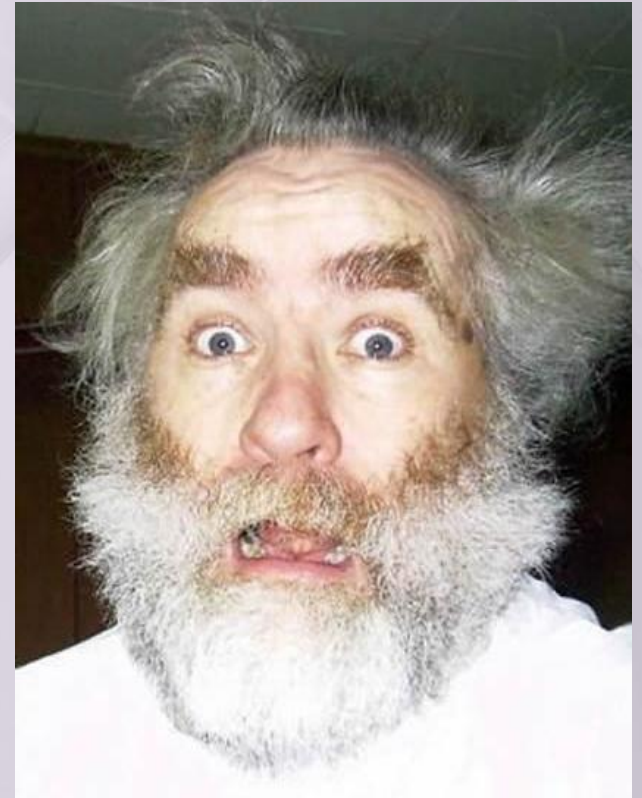
B30.5 – 2011 MOBILE and LOCOMOTIVE CRANES



Operator Training is required by ASME, and Certification for ALL construction crane operators is required by OSHA by 2014.

Testing?

You must be kidding me!



B30.5 – 2011 **MOBILE and LOCOMOTIVE CRANES**

- Added definitions of “Critical Lift” and “Minimum Breaking Force”
- Requires labeling of controls
- “Minimum Breaking Force” replaces “Minimum Breaking Strength”
- Sheave size for boom hoists clarified
- “Load Rating Chart” replaces “Load Capacity Chart”
- Next revision 2016

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- “Minimum Breaking Force” replaces “Minimum Breaking Strength”
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- Next revision 2016

B30.5 – 2011 **MOBILE and LOCOMOTIVE CRANES**

Request for Interpretation

Q: Is a crane owner required to provide a qualified rigger for lifting operations? (paraphrased)

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B30.5 – 2011 **MOBILE and LOCOMOTIVE CRANES**

Request for Interpretation

Q: Is the crane operator allowed to accept the load weight information provided to him by the site? (paraphrased)

B30.5 – 2011 **MOBILE and LOCOMOTIVE CRANES**

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A: Yes.

B30.5 – 2011 **MOBILE and LOCOMOTIVE CRANES**

Request for Interpretation

Q: Is the crane operator not responsible for improper rigging, that is out of his view?

(paraphrased)

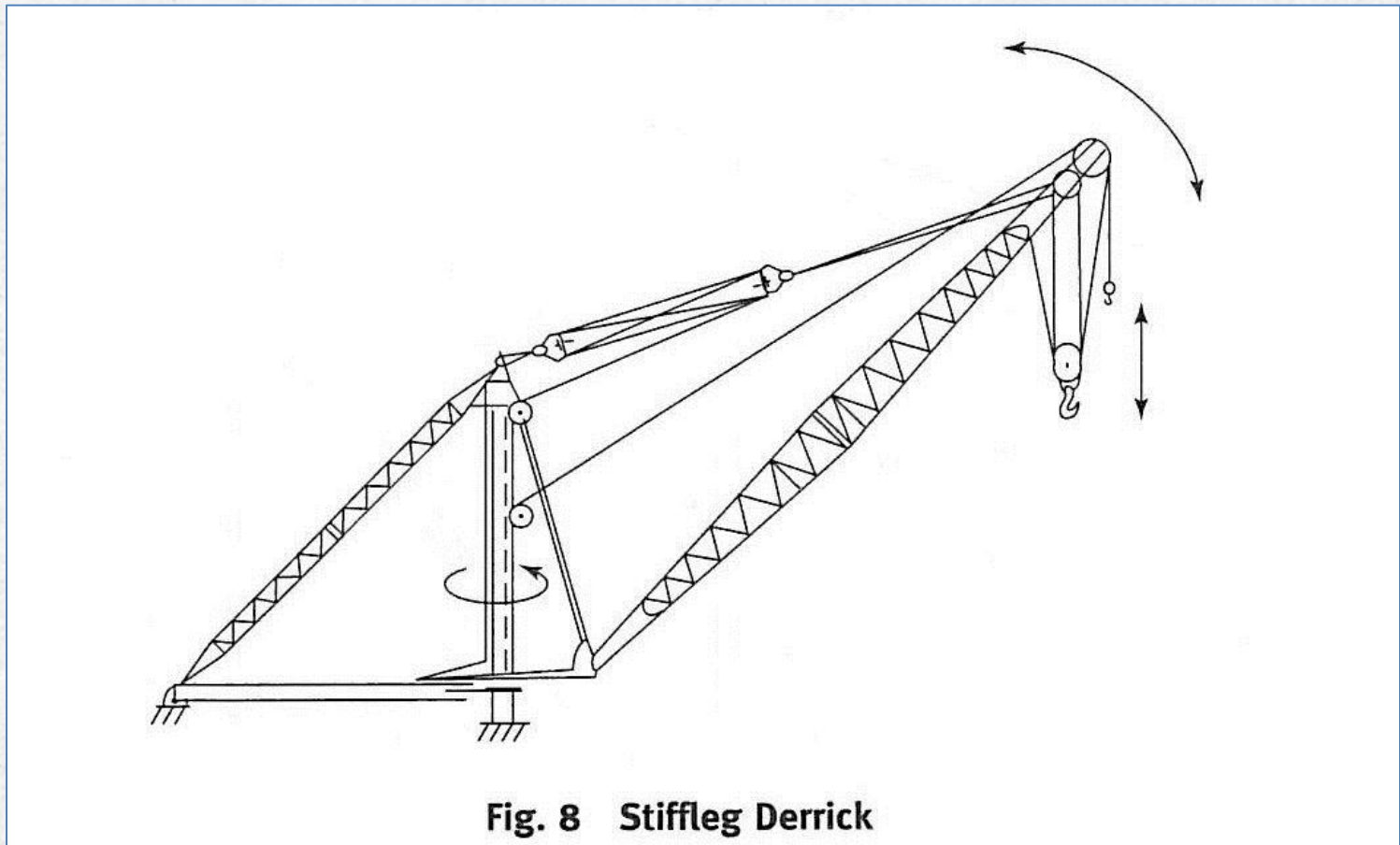
B30.5 – 2011 **MOBILE and LOCOMOTIVE CRANES**

Request for Interpretation

Q: Is the crane operator not responsible for improper rigging, that is out of his view?
(paraphrased)

A: Yes. The crane operator is not responsible for hazards or conditions not under his direct control. (paraphrased)

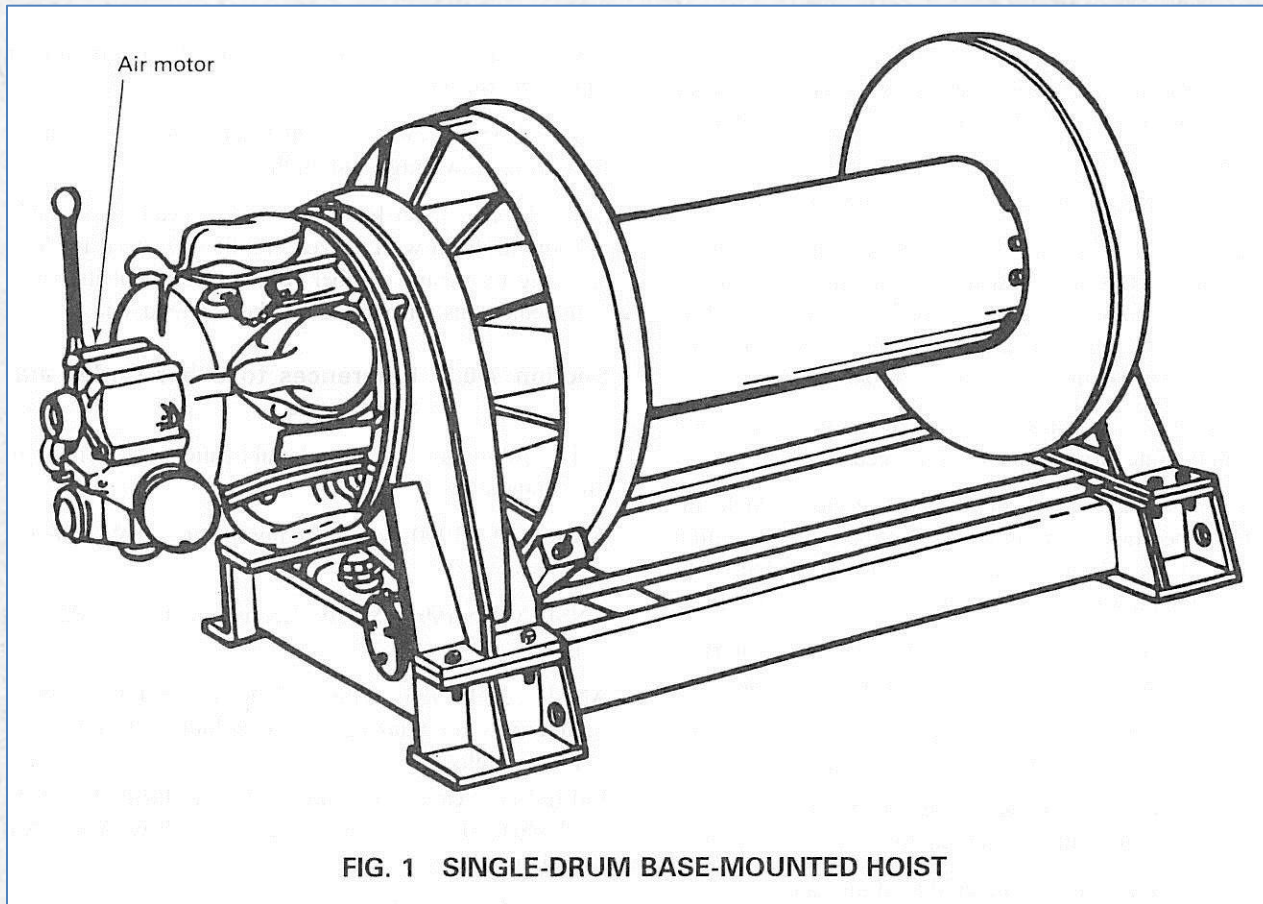
B30.6 – 2010 DERRICKS



DERRICKS subcommittee proposes new equipment.



B30.7 – 2011 WINCHES



B30.7 – 2011 WINCHES

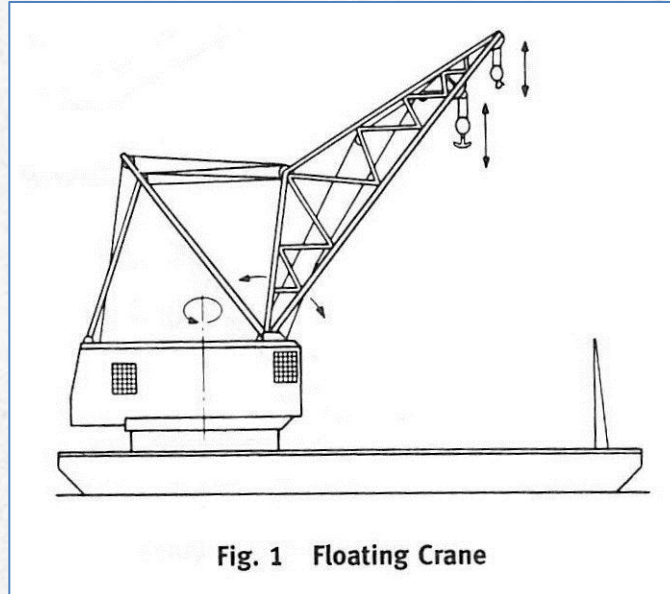
- Complete re-write
- Renamed “WINCHES”
- Allows for horizontal and vertical use
- Next revision 2016

Efforts are being made to change the Winches Volume to a more “user friendly” standard.

Though it has been greatly resisted!



B30.8 – 2010 FLOATING CRANES and FLOATING DERRICKS



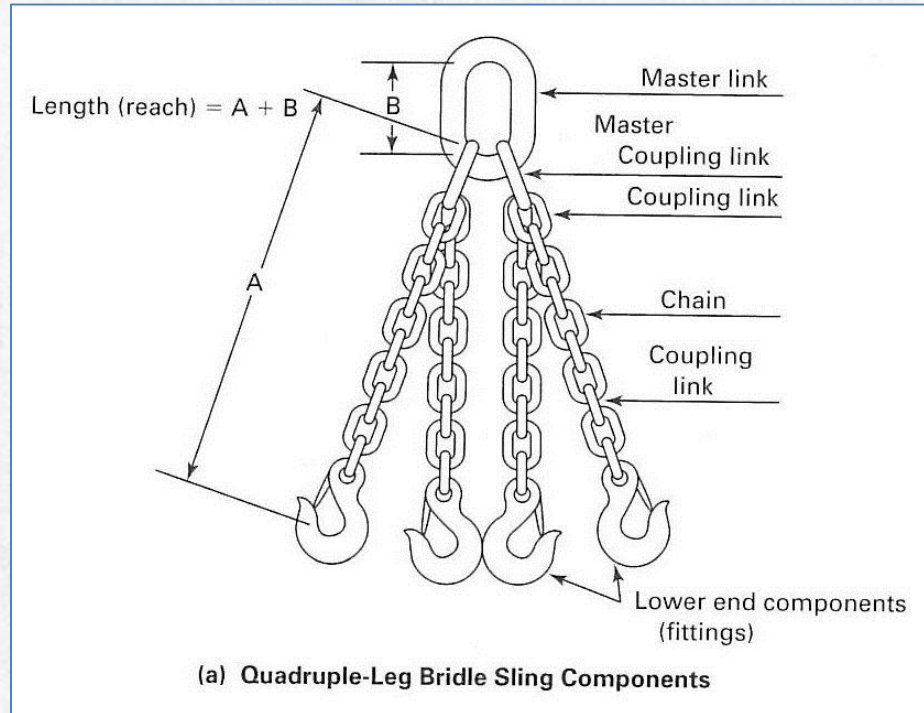
B30.8 – 2010 **FLOATING CRANES and FLOATING DERRICKS**

- Added definitions for “Liquid Free Surface” and “Loadlines”
- Expanded criteria for load ratings to include land cranes and derricks used on floating platforms
- Allows Structural Competence determination for Barges and Pontoons by Qualified Person
- Expands watertight integrity requirements
- Added “Off-Shore” barge requirements
- Next revision 2015

New Method Proposed for Drying the Clothes of Employees Working on Floating Cranes Who Happen to Fall Overboard.



B30.9 – 2010 SLINGS



B30.9 – 2010 SLINGS

- Rated Load is based on symmetrical loading of sling legs and specific sling angles
- Sling ID: rated load for one hitch type and angle on which it is based
- Repair of Chain Sling component Parts covered by other volumes
- Rated Load of Hand tucked WR Slings based on D/d of 15/1
Mechanical and Swaged splices based on 25/1 D/d

B30.9 – 2010 SLINGS

- Record of periodic inspection must be retained, but not for individual slings
- Broken wire removal criteria clarified for Cable laid WR Slings
- Terminology change: “Single/Double” Braid replaces “Hollow” Braid
- Rated loads for web Slings based on Pin diameter shown in WSTDA-WS-1
- Next revision 2013

The Slings Subcommittee
has been requested to
develop a rated capacity
table for dog slings.

Anticipate listing by
breed and bite.



B30.10 – 2009 HOOKS

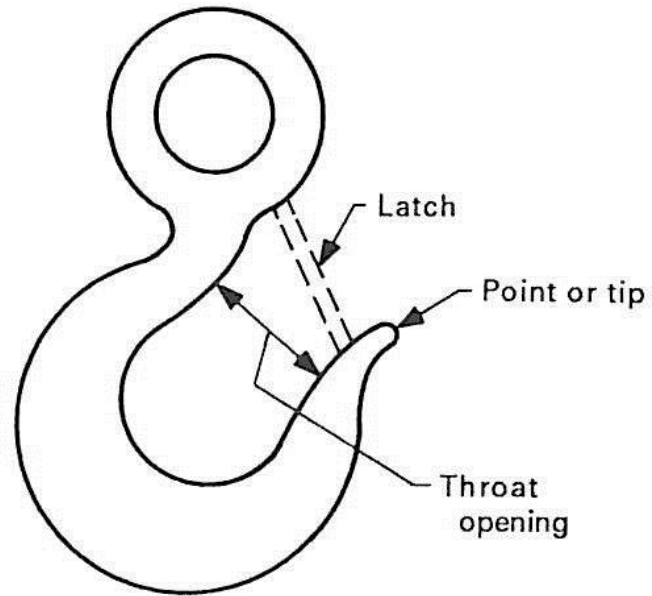


Fig. 2 Eye Hook (Latch — When Required)

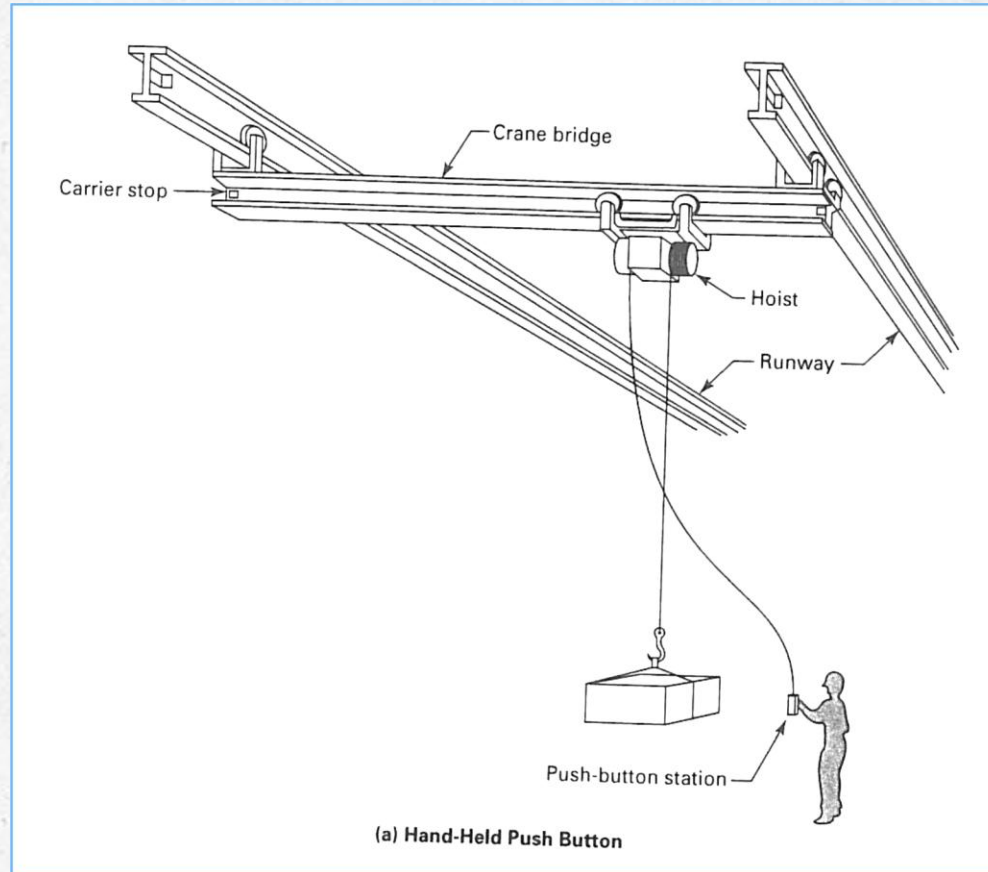
B30.10 – 2009 HOOKS

- Change of deformation requirement from 10° twist or bend to 0° .
“Any visibly apparent bend or twist from the plane of the unbent hook”
- Change of hook spread requirement from 15% to 5%, not to exceed 1/4", (or as recommended by the manufacturer)

Hooks SC asked about heat damage.



B30.11 – 2010 MONORAILS and UNDERHUNG HOISTS



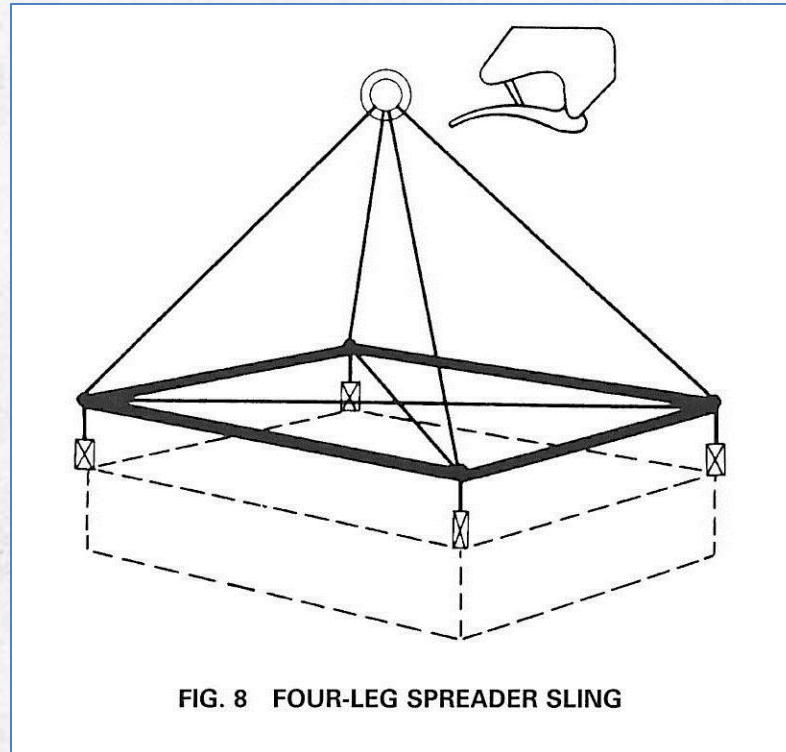
B30.11 – 2010 **MONORAILS** and **UNDERHUNG HOISTS**

- Separates Monorail Systems from Cranes
- Markings to include rated loads on separate components
- All sections affected
- Next issue should be 2015

ASME Ad-Hoc Committee to help write a new definition for Overload.



B30.12 – 2011 HANDLING LOADS SUSPENDED from ROTORCRAFT



B30.12 – 2011 **HANDLING LOADS SUSPENDED from ROTORCRAFT**

- Use of long lines added to Standard
- Expanded maintenance requirement for primary hook and support system
- Adds a spooling recommendation
- Next revision 2017

ROTORCRAFT subcommittee to Provide Interpretation about Hair Spray on the Blades.



Rotorcraft SC to Implement new Static Charge Avoidance Requirements.



B30.13 – 2011 STORAGE/RETRIEVAL MACHINES and ASSOCIATED EQUIPMENT

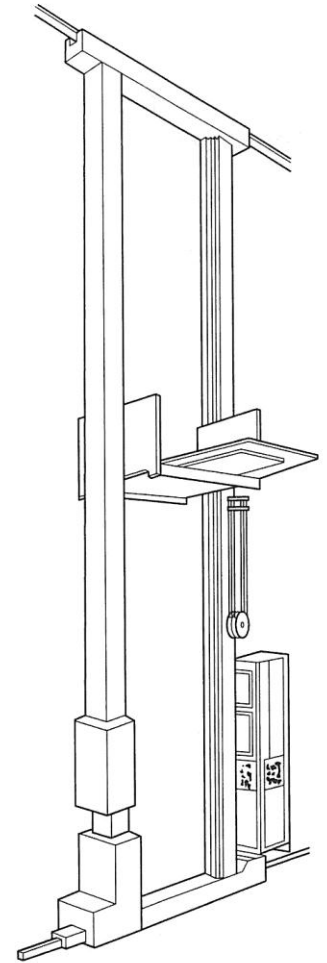


Fig. 1 Typical Unit Load S/R Machine

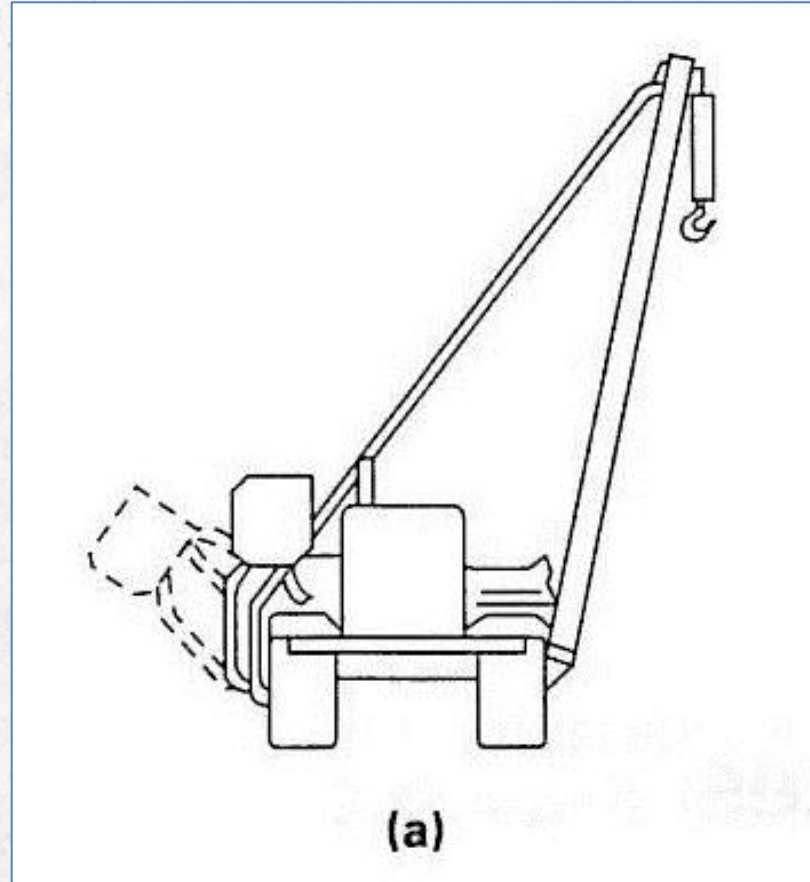
B30.13 – 2011 STORAGE/RETRIEVAL MACHINES and ASSOCIATED EQUIPMENT

- Added requirements for riders on the carriage
- Adds Belts to construction and inspection standards
- Makes allowance for other means of braking at limits other than bumpers
- Requires controls to be labeled on operator ridden equipment
- Requires Free-fall stops on carriages
- Inspections assign a “designated” person
- Next revision 2017

STORAGE/RETRIEVAL is a one man subcommittee and he often requires rest between 5-year revisions.



B30.14 – 2010 SIDE BOOM TRACTORS



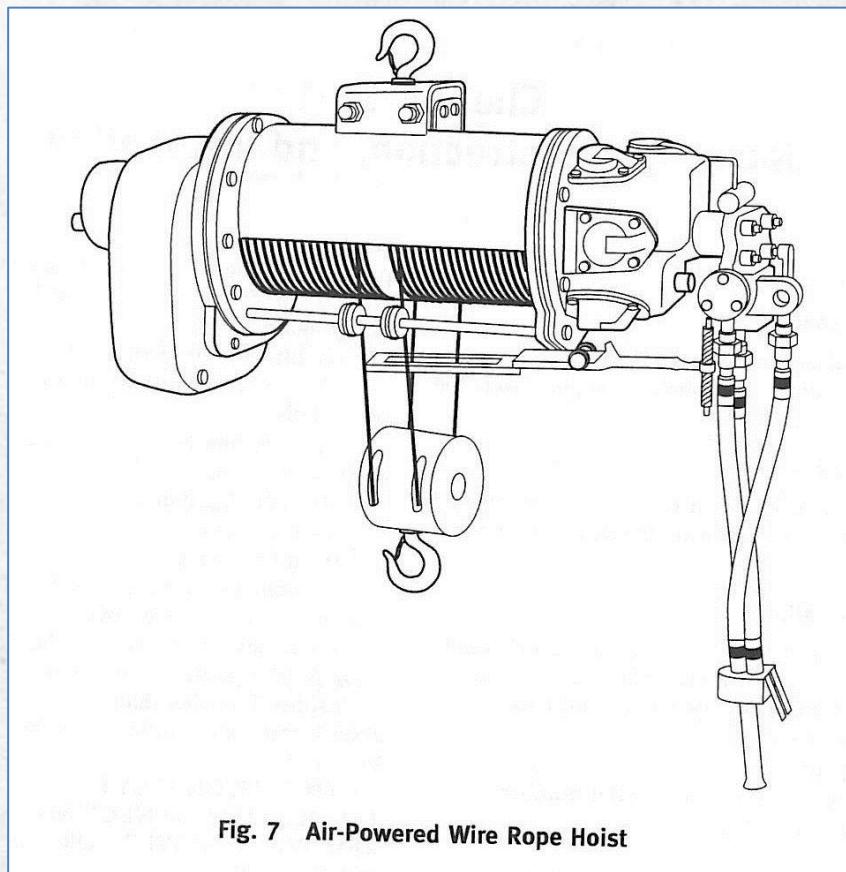
B30.14 – 2010 **SIDE BOOM TRACTORS**

- Complete re-write
- Design, Construction, Inspection and Operation
- LMI incorporated
- Next revision 2015

All new operators will be required to have special haircuts.



B30.16 – 2007 OVERHEAD HOISTS (Underhung)



B30.16 – 2007 **OVERHEAD HOISTS (Underhung)**

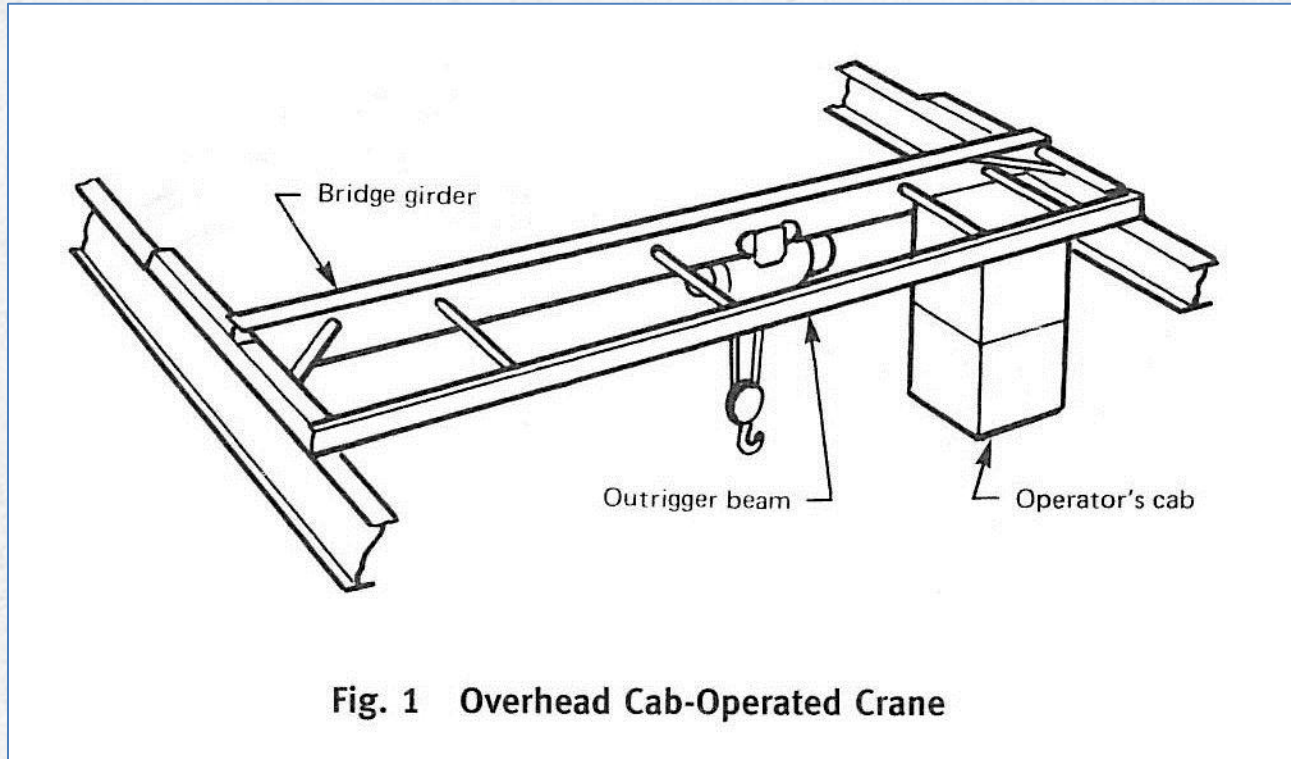
- Small changes proposed, not fully balloted or approved yet
- Next revision 2012

Hoist subcommittee is worried about its future if gravity is no longer present at worksites.



B30.17 – 2006 OVERHEAD AND GANTRY CRANES

(Top Running Bridge, Single Girder, Underhung Hoist)



B30.17 – 2006 OVERHEAD AND GANTRY CRANES

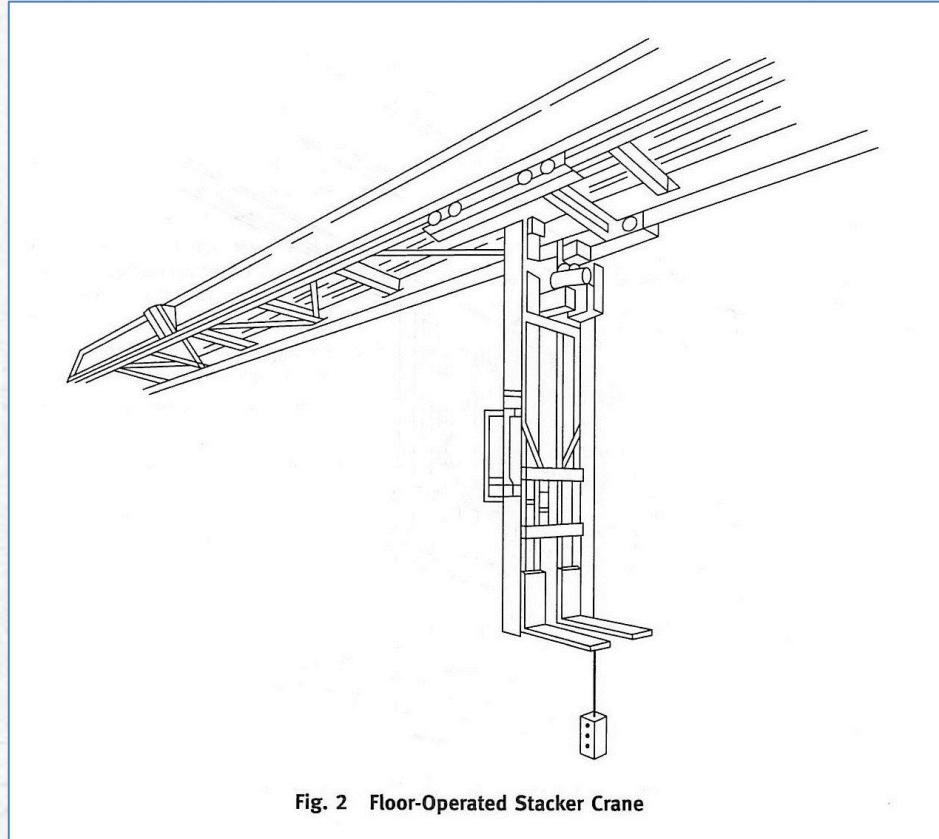
(Top Running Bridge, Single Girder, Underhung Hoist)

- Small changes
- Tracks B30.2 Overhead & Bridge Cranes
- Next revision 2012

B30.17 subcommittee takes short recreational break, with poor results for the Chairman.



B30.18 – 2011 STACKER CRANES



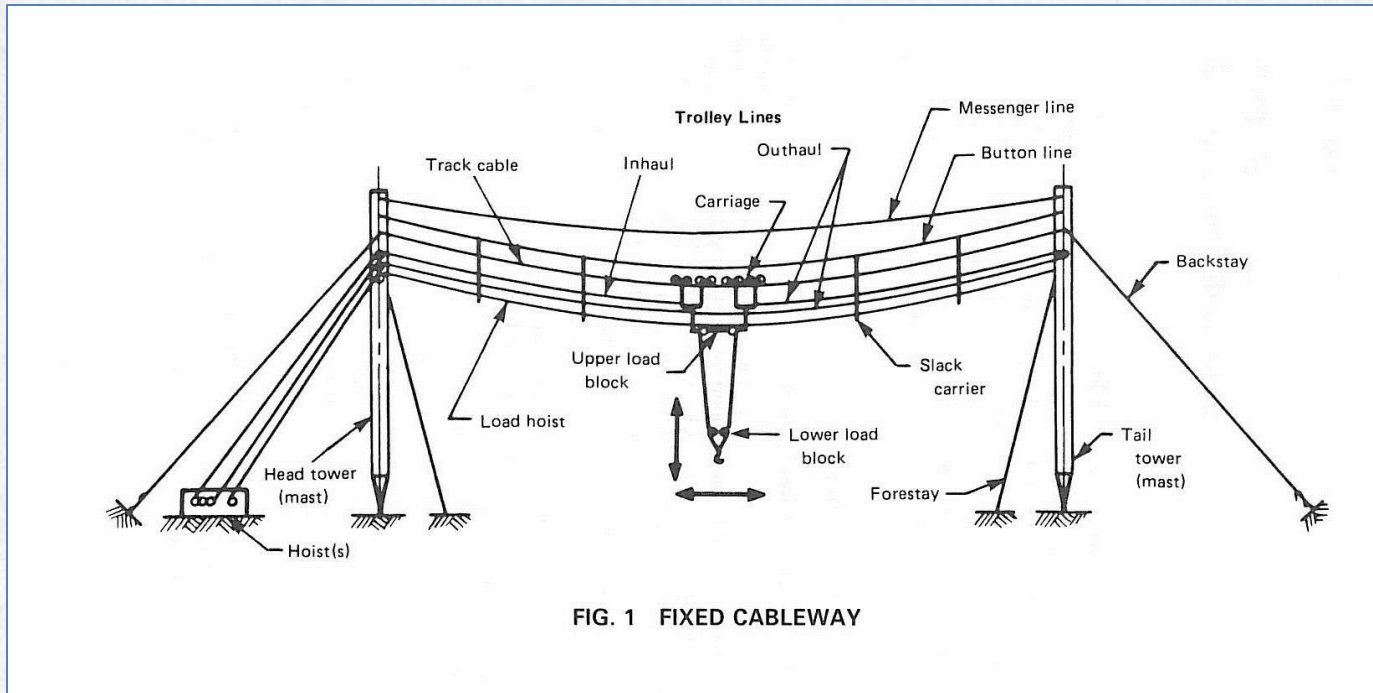
B30.18 – 2011 STACKER CRANES

- Established minimum bridge and trolley Bumper (Buffer) requirement for all Stacker Cranes regardless of use or speed. Recommends higher capacity for higher speeds and situations
- Added Pendant Controller and Switch labeling requirements
- Adds requirement for Preventive Maintenance Program and keeping Inspection Records
- Next revision 2014

Our plain-spoken STACKER CRANES chairman insists on clear language.



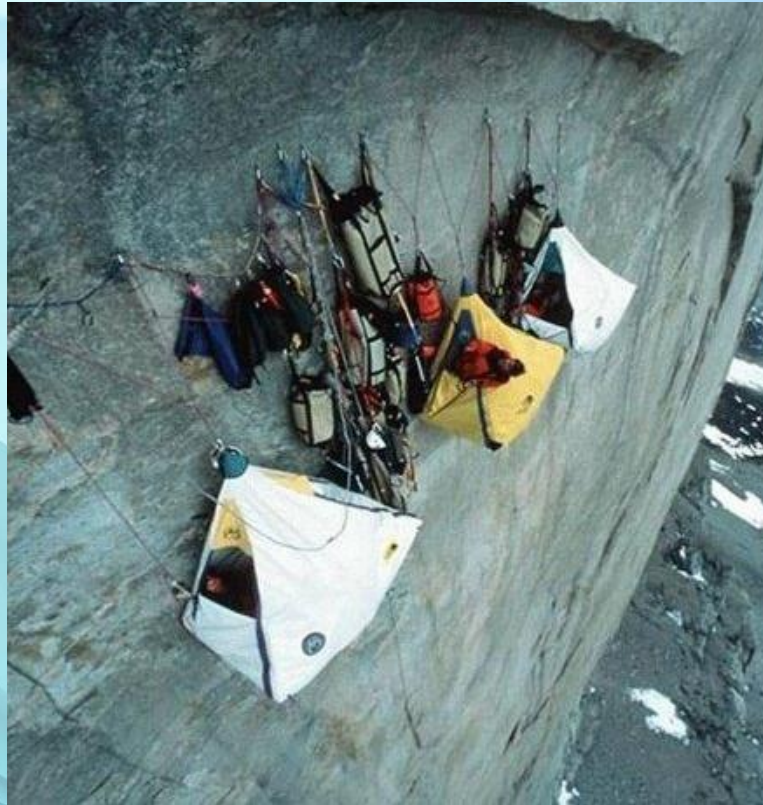
B30.19 – 2011 CABLEWAYS



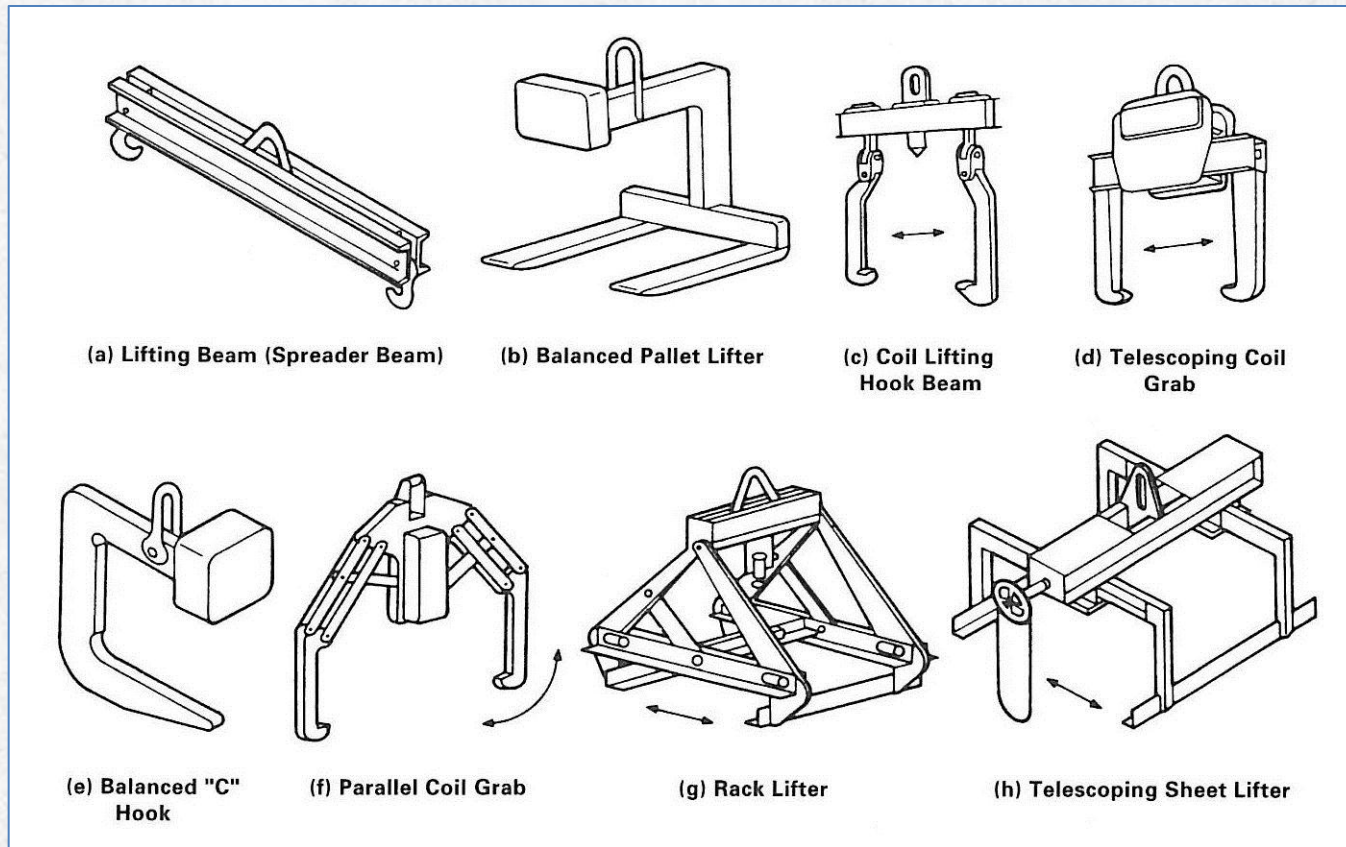
B30.19 – 2011 CABLEWAYS

- Initial inspections/testing shall be accomplished by a qualified person
- Establishes a requirement for a Preventive Maintenance Program
- Clarifies Maintenance Procedures
- Frequent Inspections Shall be performed by a designated person
- Wire Rope removal criteria expanded to include rotation resistant ropes and removes exceptions for synthetic sheaves
- Added requirement for Lockout/Tagout program
- Next revision expected in 2016

CABLEWAYS to rule on request for cliff-side installations.



B30.20 – 2010 BELOW-THE-HOOK LIFTING DEVICES



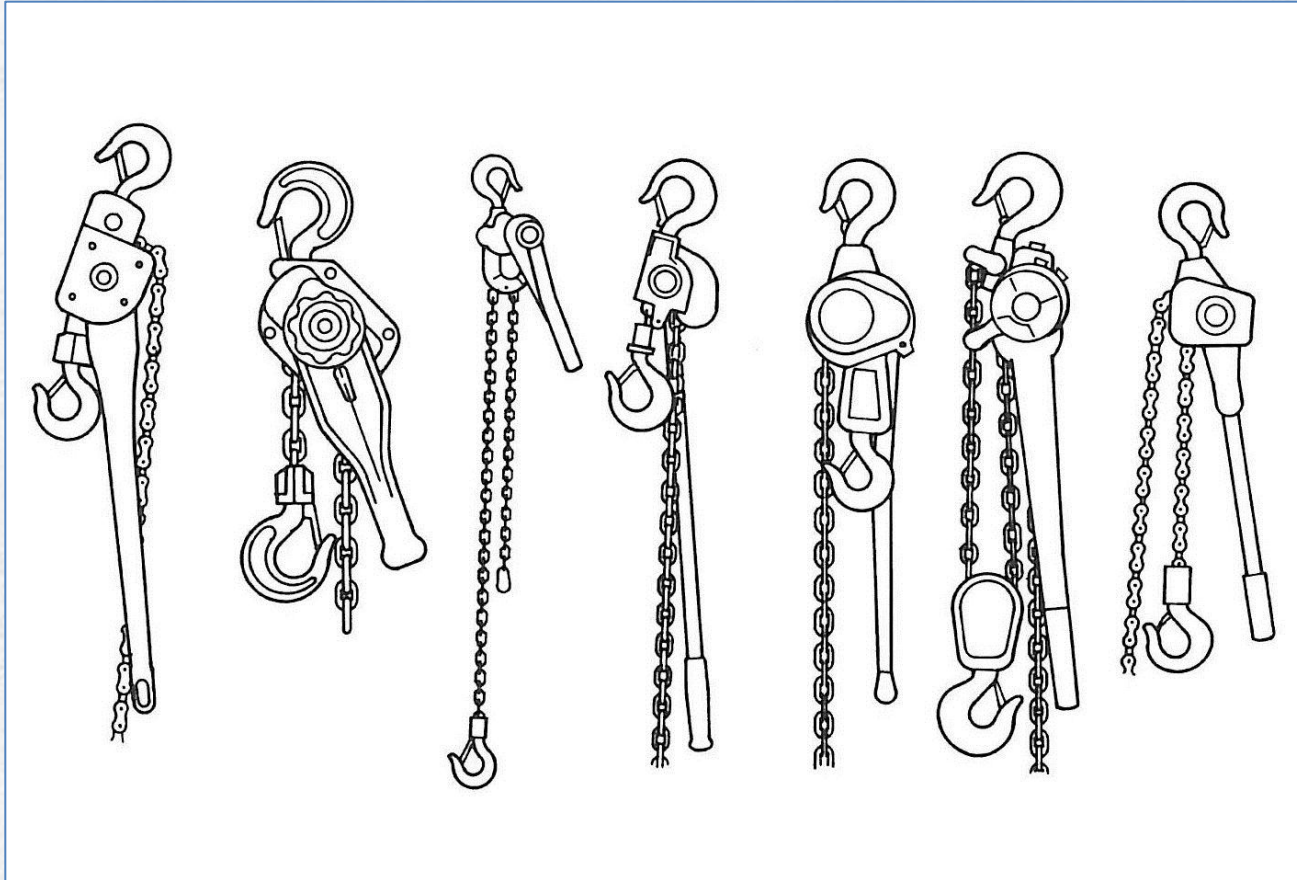
B30.20 – 2010 **BELOW-THE-HOOK LIFTING DEVICES**

- Language changed throughout to cover alterations and modifications
- Construction requirements refer to attached rigging components, (slings, hooks and hardware) standards for construction and inspection requirements
- Requires a maintenance program be established
- Next revision 2013

BTHLD Chairman announces
he is above the bull.



B30.21 – 2010 MANUALLY LEVER OPERATED HOISTS



B30.21 – 2010 MANUALLY LEVER OPERATED HOISTS

- Reaffirmed
- To address PM, Training, Minimum Breaking Force of WR, other global requirements
- Next revision 2015

New definition offered for Come-A-Long.



B30.22 – 2010 ARTICULATING BOOM CRANES

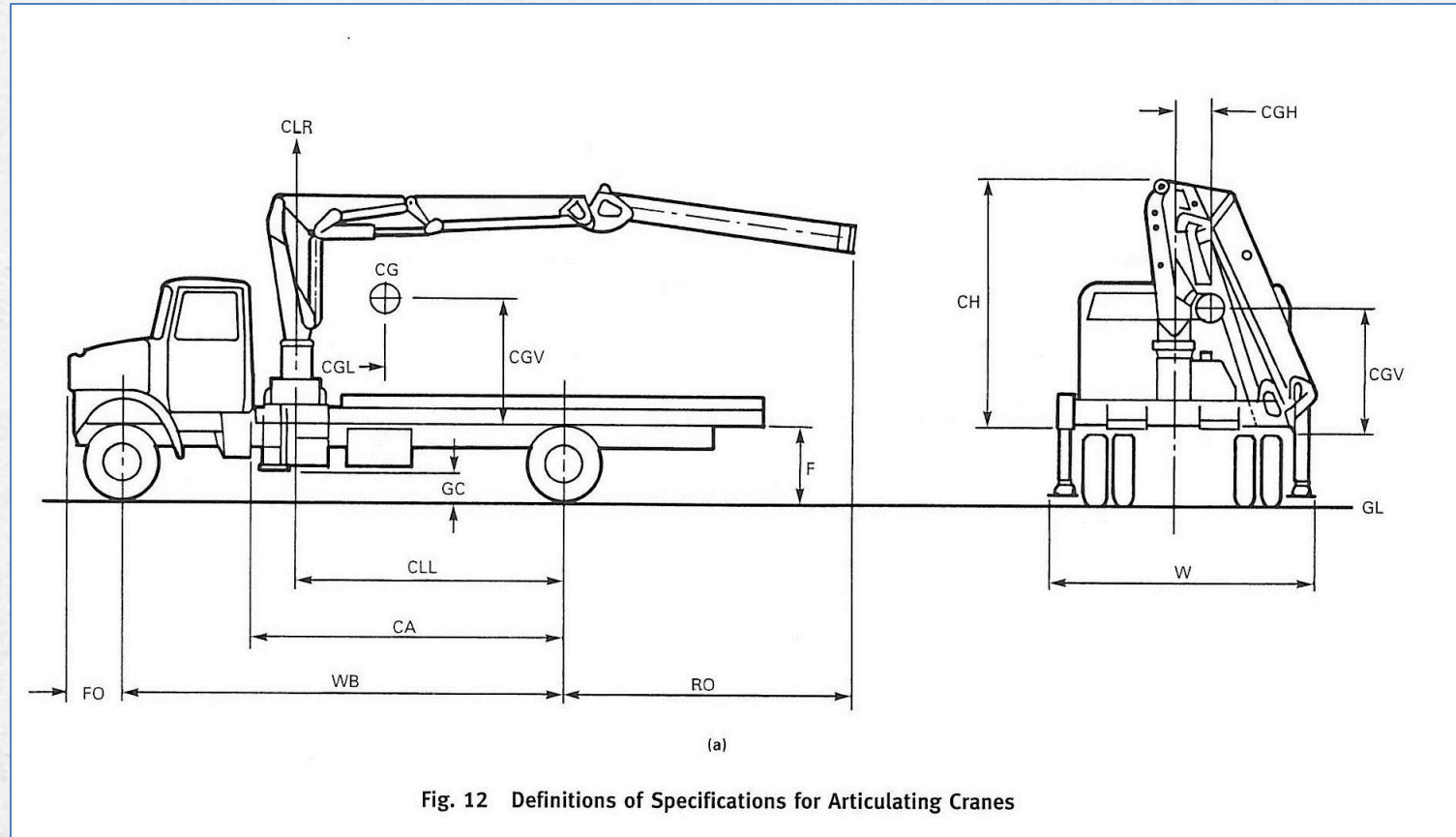


Fig. 12 Definitions of Specifications for Articulating Cranes

B30.22 – 2010 ARTICULATING BOOM CRANES

- Calculation for Load Rating with stabilizers partially extended
- Load Charts require more information and posting at all operating stations
- Clarified wire rope usage in cranes with hoists
- Adds wireless controls
- Requirement for Operational Aids
- Qualified Person replaces Designated Person
- Maintenance Programs are required
- Operator Qualifications expanded and Operational responsibilities added
- Next revision 2015

Request for Interpretation

Q: Do the load test requirements qualify the support structure (truck) as well as the crane itself? (paraphrased)

Request for Interpretation

Q: Do the load test requirements qualify the support structure (truck) as well as the crane itself? (paraphrased)

A: No. Load testing does not qualify the truck or crane. It confirms the crane's operational performance and the truck's stability with a specified load. (paraphrased)

B30.23 – 2010 PERSONNEL LIFTING SYSTEMS



B30.23 – 2010 PERSONNEL LIFTING SYSTEMS

- Expanded minimum forces for guard rails, barriers and access gates
- More defined requirements for hoisting equipment
- Qualified Persons to inspect and evaluate deficiencies
- Preventive Maintenance programs required
- Prohibitions for Hoisting Equipment Operators
- Incorporate standard terminology for positions; Lift Director, Site Supervisor
- Next revision 2015

PERSONNEL LIFTING SYSTEMS subcommittee
to develop rigging method for new carrier.



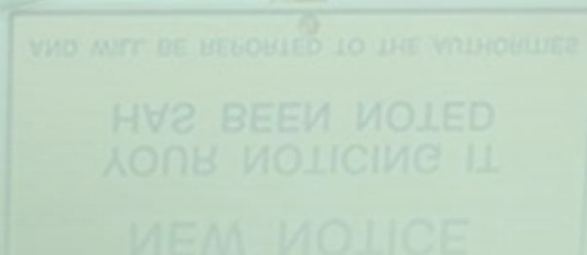
B30.24 – 2008 CONTAINER CRANES



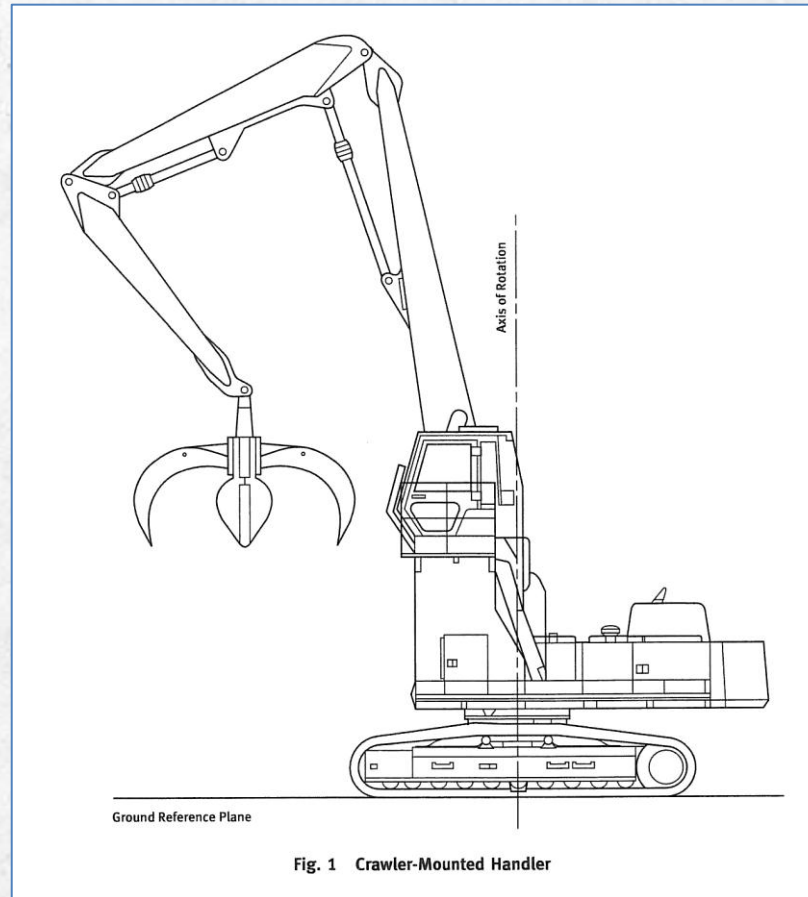
B30.24 – 2008 **CONTAINER CRANES**

- All new
- Next revision 2013

Container Crane subcommittee issues new requirements about Notices.



B30.25 – 2007 SCRAP and MATERIAL HANDLERS



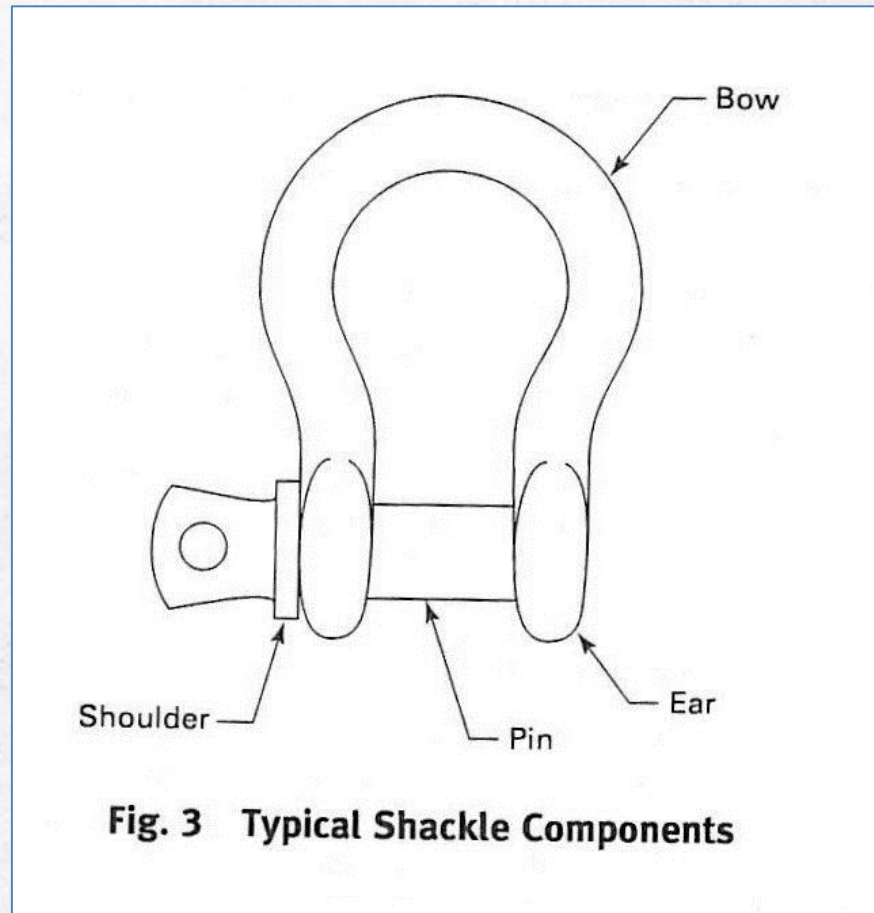
B30.25 – 2007 **SCRAP and MATERIAL HANDLERS**

- Elevated cabs have seatbelt or protective device in door opening
- Door secured against unintentional opening
- Next revision 2012

SCRAP and MATERIAL HANDLERS
consider equipment with better teeth.



B30.26 – 2010 RIGGING HARDWARE



B30.26 – 2010 RIGGING HARDWARE

- Added Chapter called Detachable Load Indicating Devices (LID) (i.e. dynamometers)
- Added metric ton values
- Added cautions to personnel
- Next publication date 2015

Rigging Hardware Committee asked for Interpretation of Correct Use of Round Master Links.



B30.27 – 2009 MATERIAL PLACEMENT SYSTEMS

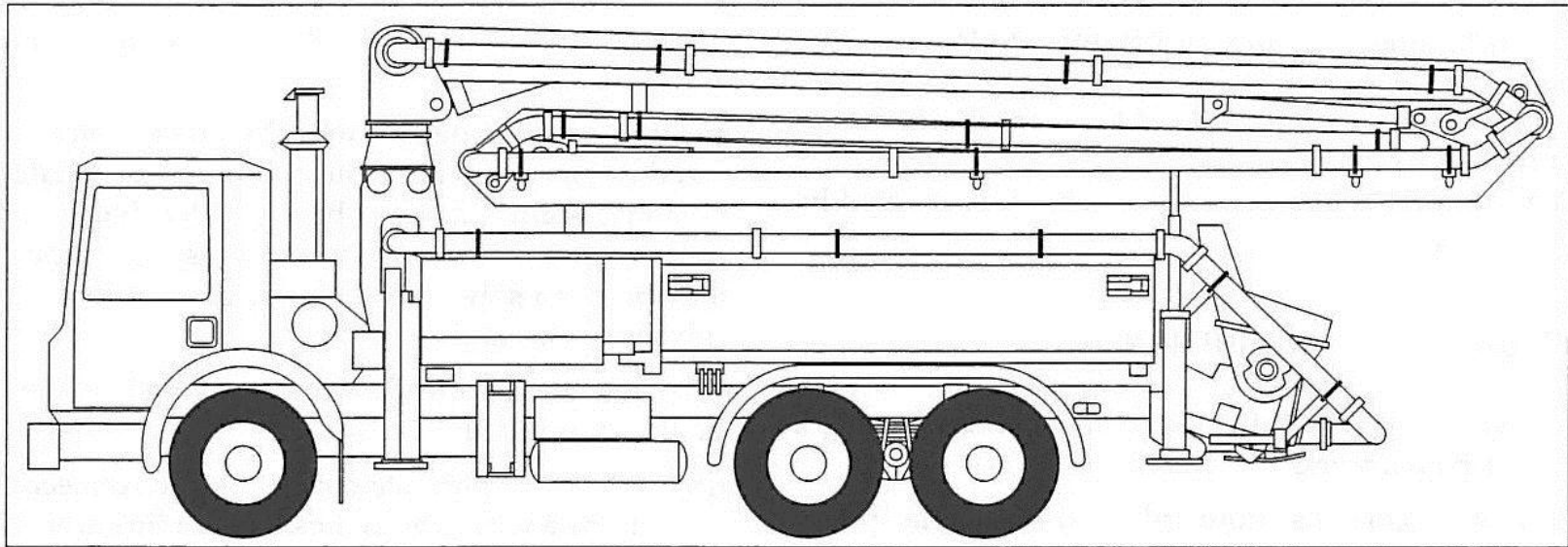


Fig. 1 Material Placement System: Truck-Mounted Concrete Pump With Integrated Placing Boom

B30.27 – 2009 MATERIAL PLACEMENT SYSTEMS

- New standard addressing concrete pumper trucks with booms
- Next revision 2014

MATERIAL PLACEMENT SYSTEMS were called to provide immediate consultation.



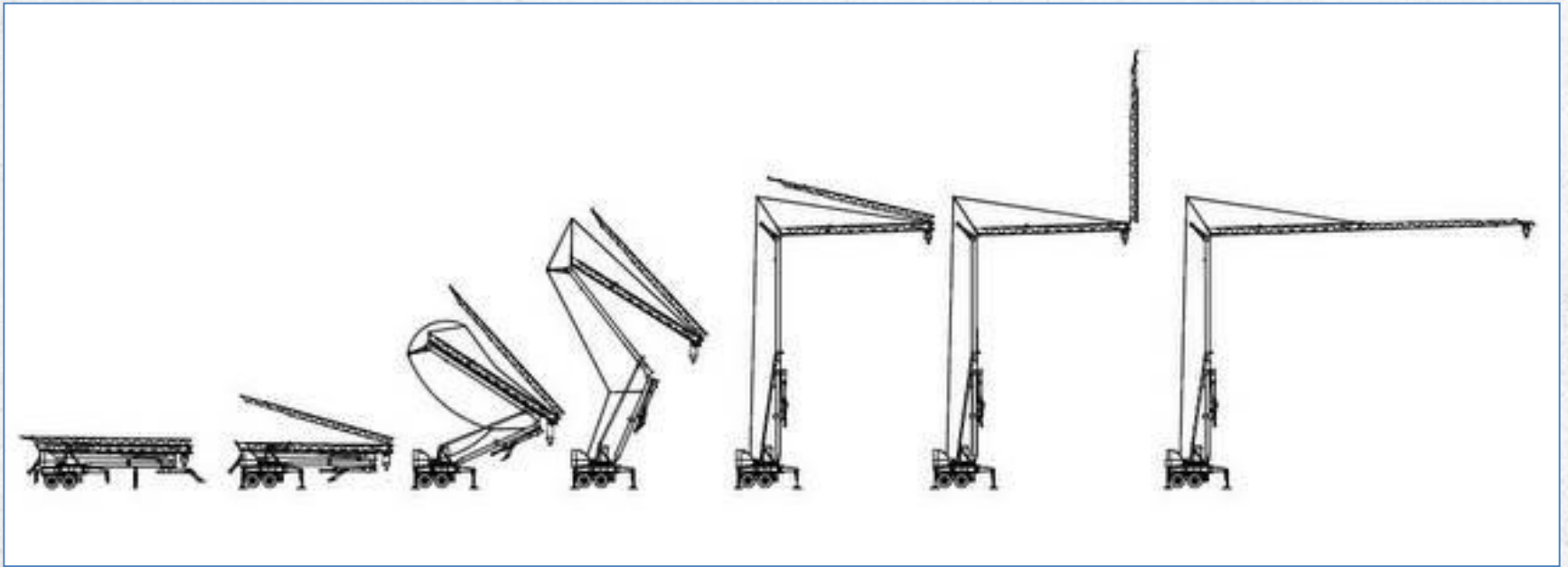
B30.28 – 2011 BALANCE LIFTING UNITS



B30.28 – 2011 **BALANCE LIFTING UNITS**

- Addresses air, hydraulic or counterweight assisted lifting machines, used in production environments
- Next Revision 2015

B30.29 – 20?? SELF-ERECTING TOWER CRANES



B30.29 – 20?? SELF-ERECTING TOWER CRANES

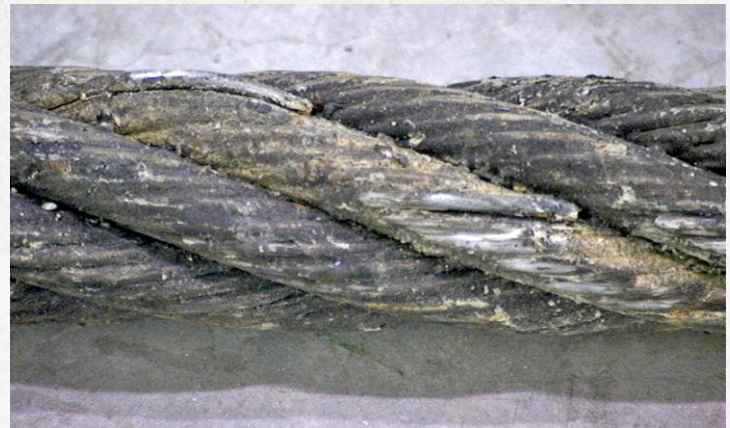
- New standard addressing Design, Construction, Inspection and Operation
- New Volume to be introduced 2012?

SE Tower Cranes sometimes pray for progress and speed, sometimes they don't.



B30.30 – 20?

WIRE ROPE



SYNTHETIC ROPE



B30.30 – 20?? ROPES

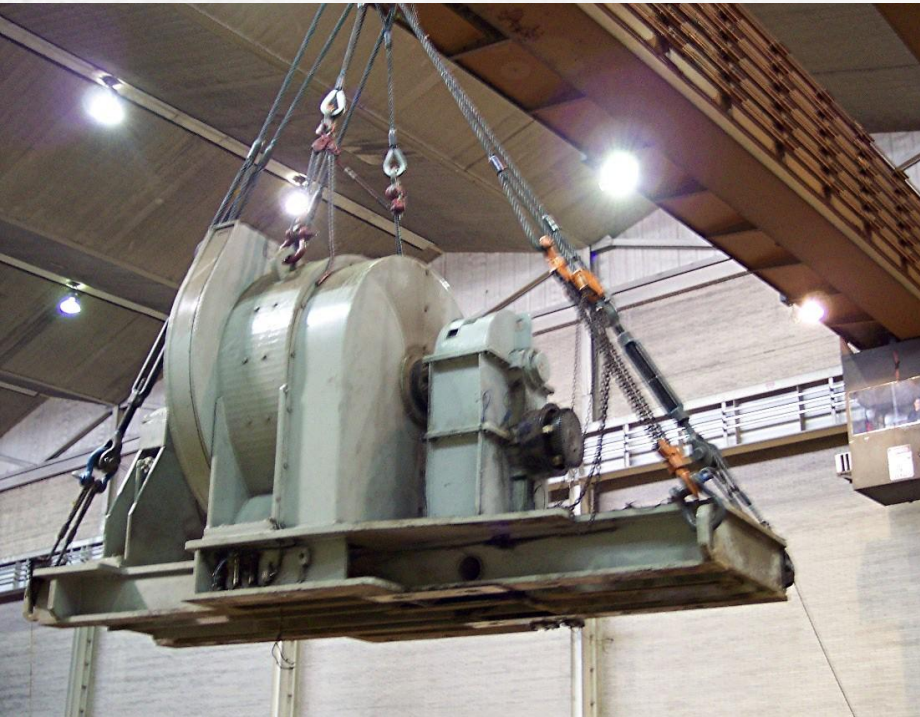
- Purpose is to replace all rope related information currently addressed in all B30 equipment Volumes
- One change concerning rope inspection can take 9 years to be included in all Volumes
- Will result in a “one-stop” shopping for all rope removal criteria for users
- Currently Synthetic Ropes are continuing to expand into the marketplace
- Exist on digger derricks, some winches
- Being considered for cranes
- Excellent track record with U.V. Ray resistance

P30 LIFT PLANNING

- **Chapter 0** Definitions
 - **Chapter 1** Classification / Considerations
 - **Chapter 2** Personnel (Roles / Responsibilities)
 - **Chapter 3** Standard Lifts
 - **Chapter 4** Critical Lifts
 - **Appendix** Samples of Lift Plans
-
- Publication proposed 2013

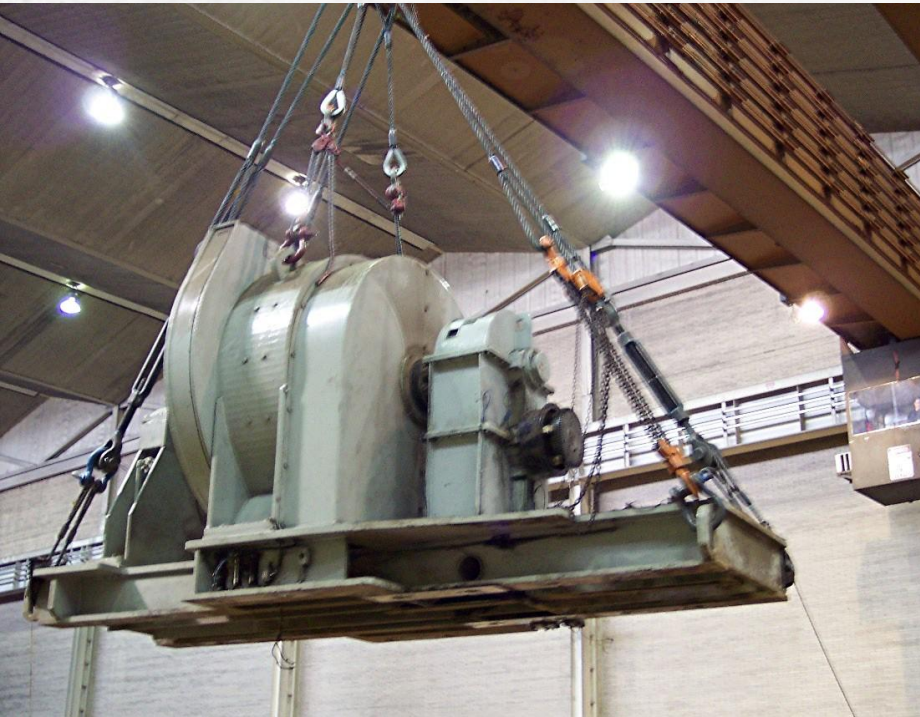
QUIZ 1

How many ASME B30 Volumes do you see represented by the load handling in this photo set?



QUIZ 1

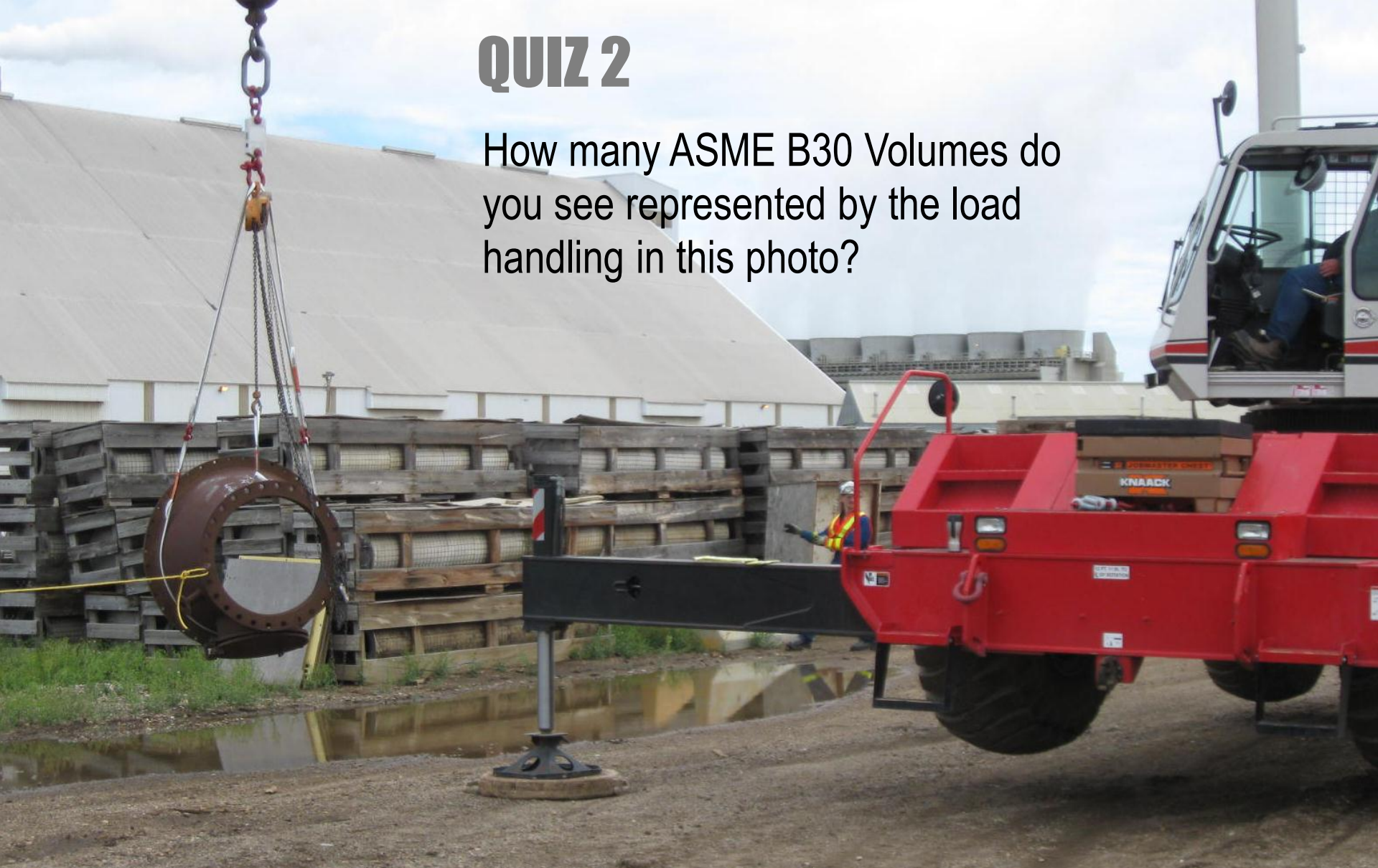
How many ASME B30 Volumes do you see represented by the load handling in this photo set?



- B30.2 Overhead Cranes
- B30.10 Hooks
- B30.30 Ropes
- B30.9 Slings
- B30.26 Rigging Hardware
- B30.16 Hoists (hand chain)
- B30.21 Lever Hoists

QUIZ 2

How many ASME B30 Volumes do you see represented by the load handling in this photo?



QUIZ 2

How many ASME B30 Volumes do you see represented by the load handling in this photo?

B30.5 Mobile Cranes

B30.10 Hooks

B30.30 Ropes

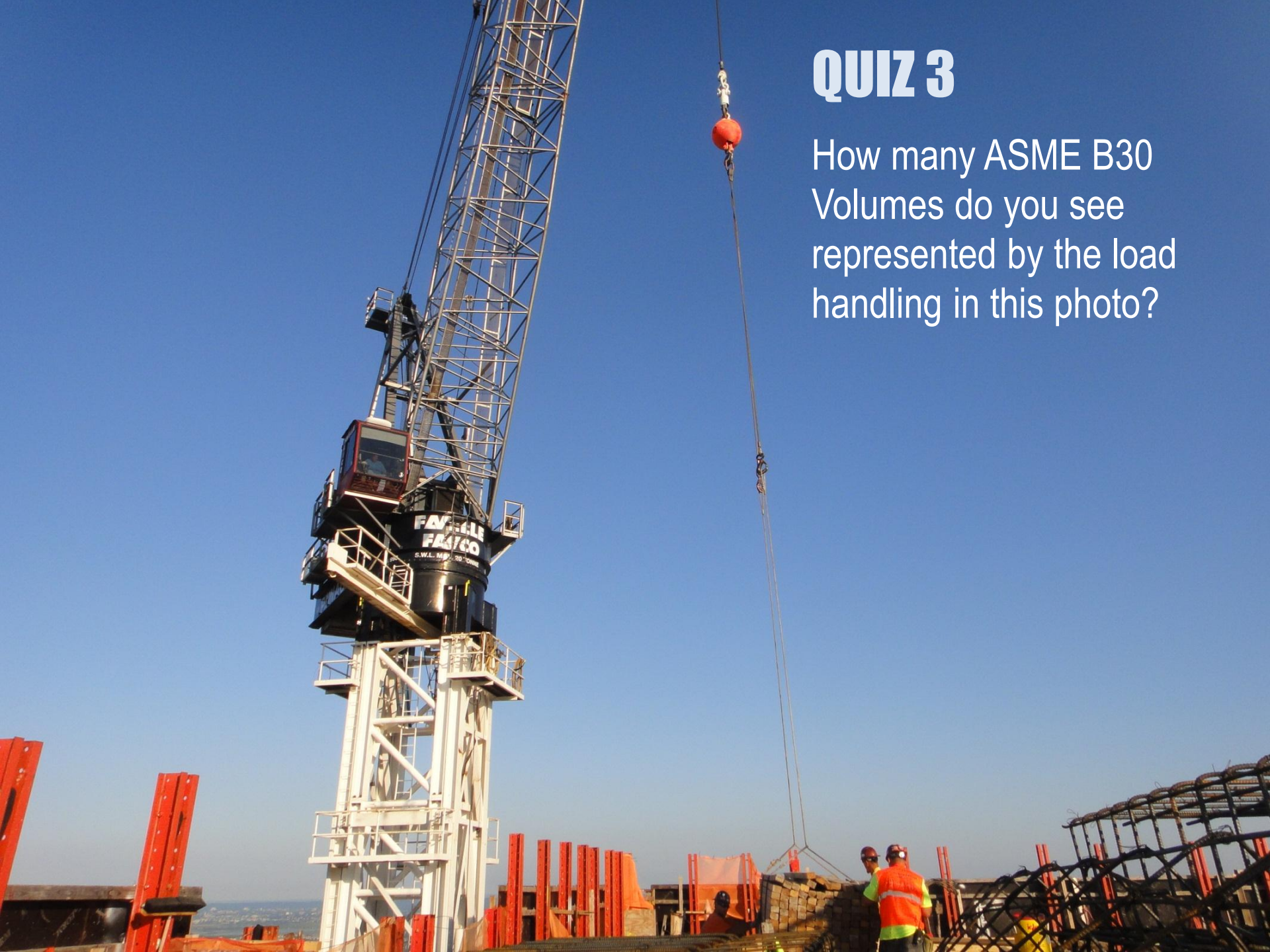
B30.26 Rigging Hardware

B30.16 Hoists (hand chain)

B30.9 Slings

QUIZ 3

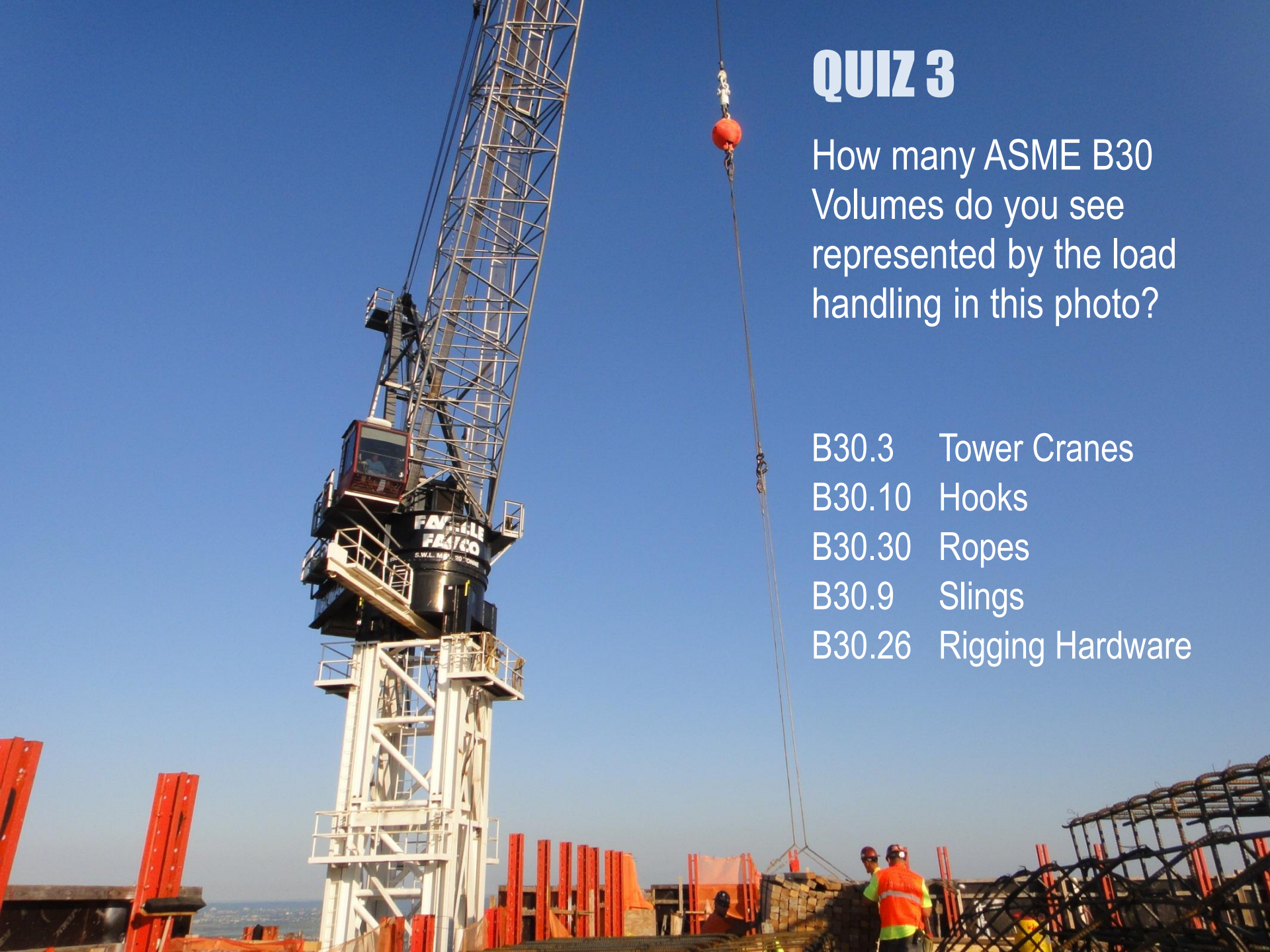
How many ASME B30 Volumes do you see represented by the load handling in this photo?



QUIZ 3

How many ASME B30 Volumes do you see represented by the load handling in this photo?

- B30.3 Tower Cranes
- B30.10 Hooks
- B30.30 Ropes
- B30.9 Slings
- B30.26 Rigging Hardware





QUIZ 4

How many ASME B30 Volumes do you see represented by the load handling in this photo?



QUIZ 4

How many ASME B30 Volumes do you see represented by the load handling in this photo?

- B30.2 Overhead Cranes
- B30.10 Hooks
- B30.30 Ropes
- B30.9 Slings
- B30.26 Rigging Hardware
- B30.20 BTHLD

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Q&A



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