B30.3-20XX
(Proposed revision of ASME B30.1-2015)

Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries
December 2019 Draft Revisions

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ASME Standards and Certification
FOREWORD

This American National Standard, Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings, has been developed under the procedures accredited by the American National Standards Institute (ANSI). This Standard had its beginning in December 1916 when an eight-page “Code of Safety Standards for Cranes,” prepared by an ASME Committee on the Protection of Industrial Workers, was presented at the annual meeting of the ASME.

Meetings and discussions regarding safety on cranes, derricks, and hoists were held from 1920 to 1925, involving the ASME Safety Code Correlating Committee, the Association of Iron and Steel Electrical Engineers, the American Museum of Safety, the American Engineering Standards Committee (AESC) [later changed to American Standards Association (ASA), then to the United States of America Standards Institute (USASI), and finally to ANSI], Department of Labor - State of New Jersey, Department of Labor and Industry - State of Pennsylvania, and the Locomotive Crane Manufacturers Association. On June 11, 1925, AESC approved the ASME Safety Code Correlating Committee’s recommendation and authorized the project with the U.S. Department of the Navy, Bureau of Yards and Docks, and ASME as sponsors.

In March 1926, invitations were issued to 50 organizations to appoint representatives to a Sectional Committee. The call for organization of this Sectional Committee was sent out October 2, 1926, and the committee organized November 4, 1926, with 57 members representing 29 national organizations. Commencing June 1, 1927, and using the eight-page code published by ASME in 1916 as a basis, the Sectional Committee developed the “Safety Code for Cranes, Derricks, and Hoists.” The early drafts of this safety code included requirements for “Jacks” but, due to inputs and comments on those drafts, the Sectional Committee decided in 1938 to make the requirements for “Jacks” a separate code. In January 1943, ASA B30.2-1943 was published addressing a multitude of equipment types and in August 1943, ASA B30.1-1943 was published just addressing “Jacks.” Both documents were reaffirmed in 1952 and widely accepted as safety standards.

Due to changes in design, advancement in techniques, and general interest of labor and industry in safety, the Sectional Committee, under the joint sponsorship of ASME and the Bureau of Yards and Docks (now the Naval Facilities Engineering Command) was reorganized on January 31, 1962, with 39 members representing 27 national organizations. The new committee changed the format of ASA B30.2-1943 so that the multitude of equipment types it addressed could be published in separate volumes that could completely cover the construction, installation, inspection, testing, maintenance, and operation of each type of equipment that was included in the scope of ASA B30.2. This format change resulted in the initial publication of B30.3, B30.5, B30.6, B30.11 and B30.16 being designated as “Revisions” of B30.2 with the remainder of the B30 Volumes being published as totally new volumes. ASA changed its name to USASI in 1966 and to ANSI in 1969, which resulted in B30 volumes from 1943 to 1968 being designated as either “ASA B30,” “USAS B30,” or “ANSI B30,” depending on their date of publication.

In 1982, the Committee was reorganized as an Accredited Organization Committee, operating under procedures developed by ASME and accredited by ANSI. This Standard presents a coordinated set of rules that may serve as a guide to government and other regulatory bodies and municipal authorities responsible for the guarding and inspection of the equipment falling within its scope. The suggestions leading to accident prevention are given both as mandatory and advisory provisions; compliance with both types may be required by employers of their employees.

In case of practical difficulties, new developments, or unnecessary hardship, the administrative or regulatory authority may grant variances from the literal requirements or permit the use of other devices or methods, but only when it is clearly evident that an equivalent degree of protection is thereby secured. To secure uniform application and interpretation of this Standard, administrative or regulatory authorities are urged to consult the B30 Committee, in accordance with the format described in Section IX of the Introduction, before rendering decisions on disputed points.

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Safety codes and standards are intended to enhance public safety. Revisions result from committee consideration of factors such as technological advances, new data, and changing environmental and industry needs. Revisions do not imply that previous editions were inadequate.

B30.1 Jacks has been in existence since 1926, with new editions published in 1943, 1967, 1981, 1986, 1992, 1998, and 2004. The 2009 revision of this Volume revised the title to Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantry. The Volume was reformatted to incorporate the requirements for jacks, air-lifting bags, industrial rollers, air casters, and telescopic hydraulic gantry systems into Chapters 1-1 through 1-6. The 2015 edition adds Chapter 1-7 on strand jack systems. It also addresses responsibilities of personnel, personnel competence, and translations. This edition contains changes to definitions, added responsibilities of riggers and several other changes.

This Volume of the Standard, which was approved by the B30 Committee and by ASME, was approved by ANSI and designated as an American National Standard on TBD.
### Summary of Revisions

<table>
<thead>
<tr>
<th>Record</th>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-1069</td>
<td>1-0.4.4</td>
<td>Responsibilities of Riggers</td>
</tr>
<tr>
<td>19-1070</td>
<td>1-0.3</td>
<td>Personnel Competence</td>
</tr>
<tr>
<td>19-1071</td>
<td>1-0.2</td>
<td>Definitions</td>
</tr>
</tbody>
</table>
1-0.4.4 **Standard Hand Signals**  Responsibilities of Riggers

Riggers assigned to a load handling activity shall, at a minimum, be responsible for:

(a) Ensuring the weight of the load and its approximate center of gravity have been obtained, provided, or calculated.

(b) Selecting the proper rigging equipment, inspecting it, and complying with the applicable operating practices according to the criteria of the applicable ASME volume (i.e., B30.9, B30.10, B30.20, B30.23, B30.26).

(c) Ensuring the rated load of the rigging equipment as selected and configured is sufficient for the load to be handled, based on the number of legs, hitch configuration and effects of angles.

(d) **Ensuring that the rigging equipment is properly attached to the hook, shackle, or other load handling device**.

(e) Ensuring that rigging equipment is adequately protected from abrasion, cutting, or other damage during load handling activities.

(f) Ensuring that the load is rigged to be in a manner to ensure balanced and stability during the load handling activity.

(g) Knowing and understanding the applicable signals for the equipment in use.

(h) **Ensuring that a tag line(s) is installed and used** when additional load control is required.

Rationale: These changes to the B30.1 global rigger responsibilities ballot were made at the May ASME B30 meeting and have been incorporated into this reconsideration ballot. Thank you.

1-0.4.45 Standard Hand Signals

See Fig. 1-0.4.45-1.

*Note: Due to section number change, all references to the figure will be changed from 1-0.4.4-1 to 1-0.4.5-1, see chart below.*

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-0.4.45-1</td>
<td>Standard Hand Signals</td>
<td>page iv</td>
</tr>
<tr>
<td>1-01.1</td>
<td>Illustrations</td>
<td>Figures 1-0.4.45-1 [page 1]</td>
</tr>
<tr>
<td>1-0.4.45</td>
<td>Standard Hand Signals</td>
<td>Fig. 1-0.4.45-1 [page 5]</td>
</tr>
<tr>
<td>1-0.4.45</td>
<td>Standard Hand Signals</td>
<td>Fig. 1-0.4.45-1 [page 6]</td>
</tr>
<tr>
<td>1-1.9.5.2 (b)</td>
<td>Communication</td>
<td>Fig. 1-0.4.45-1 [page 12]</td>
</tr>
<tr>
<td>1-2.9.5.2 (b)</td>
<td>Communication</td>
<td>Fig. 1-0.4.45-1 [page 17]</td>
</tr>
<tr>
<td>1-3.9.5.2 (b)</td>
<td>Communication</td>
<td>Fig. 1-0.4.45-1 [page 23]</td>
</tr>
<tr>
<td>1-4.9.5.2 (b)</td>
<td>Communication</td>
<td>Fig. 1-0.4.45-1 [page 28]</td>
</tr>
<tr>
<td>1-5.9.5.2 (b)</td>
<td>Communication</td>
<td>Fig. 1-0.4.45-1 [page 33]</td>
</tr>
<tr>
<td>1-6.9.5.2 (b)</td>
<td>Communication</td>
<td>Fig. 1-0.4.45-1 [page 38]</td>
</tr>
</tbody>
</table>
SECTION 1-0.3: PERSONNEL COMPETENCE

Persons performing the functions identified in this Volume shall meet the applicable qualifying criteria stated in this Volume and shall, through education, training, experience, skill, and physical fitness, as necessary, be competent and capable to perform the functions as determined by the employer or employer’s representative.

Rationale: At the January 2019 B30 Main Committee meeting, it was brought to everyone’s attention that Global Request 2011-3 had not been properly incorporated into several B30 volumes, including B30.1. B30.1 does contain specific qualification criteria.
Global Request 2015-1

SUBJECT: Lexicon Consistency

Request: Subcommittees to review their definitions sections and:
1) Delete definitions not used in the Volume.
2) SC Chairs to take the work of the ad hoc committee and review and apply, as appropriate, those definitions to their Volume. The lexicon definitions are a recommendation and the proposed definitions are not a mandate. The subcommittees should be working toward reducing the overall number of B30 definitions.
3) Definitions shall appear as they are referenced in the Volumes (e.g. "brake, holding" would change to "holding brake")

Rationale: To be consistent among all volumes. The main committee did not designate which standards shall incorporate these into their Volumes, it is up to the Subcommittee to review and determine if it is applicable.

Item 1 Approved May 2015 meeting. Item 2 revised during January 2016 meeting and item 3 added in the January 2016 meeting.

Global Request 2014-2

SUBJECT: Definition of Should and Shall

Request: The following is the definition wording from the proposal that will be need to be added to the definitions section of the Volumes:
“shall: a word indicating a requirement"
“should: a word indicating a recommendation”

Rationale: To be consistent among all volumes, the main committee approved a motion to revise the definitions of should and shall to keep to the basic meanings expressed in Section VI of the B30 Standard Introduction.

Approved September 2014
Rationale: Align ASME B30.1 definitions to the Global Requests 2015-1 and 2014-2, changes to section 1-0.2 definitions are below.

SECTION 1-0.2: DEFINITIONS

*air caster system:* consists of a system consisting of an air supply, air hoses, pressure control console, and air casters.

*air-lifting bag system:* consists of a system consisting of an air supply, air hoses, pressure control unit, and air-lifting bag.

*auxiliary load point, auxiliary:* any point of load application other than the primary load point.

*jack, double-acting hydraulic jack:* a jack that is extended and retracted under hydraulic pressure.

*air caster, gap crossing air caster:* a fabricated module that contains a load support plate, a landing pad, and a perforated air bladder that provides the ability to travel across gaps and steps in the operating surface.

*jack, hydraulic jack:* a jack using pressurized liquid to move the load.

*air caster, high lift air caster:* a fabricated module that contains a load support plate, a landing pad, and an air bladder that provides approximately twice the effective lift height of a low-lift air caster and inflates without requiring contact with the operating surface for inflation.

*load point, integral auxiliary load point:* any nonremovable point of load application other than the primary load point.

*LHE (load handling equipment) (LHE):* all equipment covered by ASME B30.1, used to move a load vertically or horizontally.

Rationale: The changes make this definition consistent with ASME B30.30, as well as more descriptive, and thus, more useful. We need to keep the LHE because it is used in our volume.

*air caster, low lift air caster:* a fabricated module that contains a load support plate, a landing pad, and an air bladder that provides approximately half the effective lift height of a high-lift air caster and requires contact with the operating surface for inflation.
**load point:** the primary point of load application established by the jack manufacturer.

**load:** the total superimposed weight or force to be overcome by the load-handling equipment.

**jack, mechanical jack:** a jack using any means other than fluid to move the load. (Recommend changing as indicated.)

**service, normal service:** service that involves use of loads at or below handling of loads within the rated load.

**rated load:** the maximum allowable working load established by the equipment manufacturer. The terms “rated capacity” and “working load limit” are commonly used to describe rated load.

**screw extension:** a device that increases the hydraulic jack’s closed length.

**jack, self-contained jack:** a hydraulic jack whose hydraulic reservoir and pump are contained within the jack’s housing.

**service, severe service:** service that involves normal service coupled with abnormal rigging or operating conditions.

**jack, single-acting hydraulic jack:** a jack that is extended under using hydraulic pressure and retracted by release of the hydraulic pressure.

**shall:** indicates that the rule is mandatory and must be followed. a word indicating a requirement.

**should:** indicates that the rule is a recommendation, the advisability of which depends on the facts in each situation. a word indicating a recommendation.

**service, special service:** service that involves operation, other than normal or severe, which is approved that is identified by a qualified person.