

**ASME B30.21-2014**  
[Revision of B30.21-2005 (R2010)]

# Lever Hoists

---

**Safety Standard for Cableways,  
Cranes, Derricks, Hoists, Hooks,  
Jacks, and Slings**

**AN AMERICAN NATIONAL STANDARD**



**The American Society of  
Mechanical Engineers**

**ASME B30.21-2014**

**[Revision of ASME B30.21-2005 (R2010)]**

# Lever Hoists

---

**Safety Standard for Cableways,  
Cranes, Derricks, Hoists, Hooks,  
Jacks, and Slings**

**AN AMERICAN NATIONAL STANDARD**



**The American Society of  
Mechanical Engineers**

Two Park Avenue • New York, NY • 10016 USA

Date of Issuance: May 30, 2014

The next edition of this Standard is scheduled for publication in 2019. This Standard will become effective 1 year after the Date of Issuance.

ASME issues written replies to inquiries concerning interpretations of technical aspects of this Standard. Interpretations are published on the ASME Web site under the Committee Pages at <http://cstools.asme.org/> as they are issued. Interpretations will also be included with each edition.

Errata to codes and standards may be posted on the ASME Web site under the Committee Pages to provide corrections to incorrectly published items, or to correct typographical or grammatical errors in codes and standards. Such errata shall be used on the date posted.

The Committee Pages can be found at <http://cstools.asme.org/>. There is an option available to automatically receive an e-mail notification when errata are posted to a particular code or standard. This option can be found on the appropriate Committee Page after selecting "Errata" in the "Publication Information" section.

ASME is the registered trademark of The American Society of Mechanical Engineers.

This code or standard was developed under procedures accredited as meeting the criteria for American National Standards. The Standards Committee that approved the code or standard was balanced to assure that individuals from competent and concerned interests have had an opportunity to participate. The proposed code or standard was made available for public review and comment that provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

ASME does not "approve," "rate," or "endorse" any item, construction, proprietary device, or activity.

ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable letters patent, nor assume any such liability. Users of a code or standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

Participation by federal agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this code or standard.

ASME accepts responsibility for only those interpretations of this document issued in accordance with the established ASME procedures and policies, which precludes the issuance of interpretations by individuals.

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

The American Society of Mechanical Engineers  
Two Park Avenue, New York, NY 10016-5990

Copyright © 2014 by  
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
All rights reserved  
Printed in U.S.A.

# CONTENTS

Foreword .....	iv
Committee Roster .....	vi
B30 Standard Introduction .....	viii
Summary of Changes .....	xi
<b>Chapter 21-0 Scope, Definitions, Personnel Competence, and References .....</b>	<b>1</b>
Section 21-0.1 Scope of ASME B30.21 .....	1
Section 21-0.2 Definitions .....	1
Section 21-0.3 Personnel Competence .....	7
Section 21-0.4 References .....	7
<b>Chapter 21-1 Construction and Installation .....</b>	<b>8</b>
Section 21-1.1 Marking .....	8
Section 21-1.2 Construction .....	8
Section 21-1.3 Translation .....	10
<b>Chapter 21-2 Inspection and Testing .....</b>	<b>11</b>
Section 21-2.1 Inspection .....	11
Section 21-2.2 Lifting Load Chain, Rope, or Web Strap Inspection .....	14
Section 21-2.3 Testing .....	15
<b>Chapter 21-3 Operation and Operator Training .....</b>	<b>16</b>
Section 21-3.1 Training .....	16
Section 21-3.2 Hoisting Practices for Operators .....	16
<b>Chapter 21-4 Maintenance and Maintenance Training .....</b>	<b>18</b>
Section 21-4.1 Training .....	18
Section 21-4.2 Maintenance .....	18
Section 21-4.3 Welded Link Chain Replacement and Maintenance .....	18
Section 21-4.4 Roller and Rollerless Chain Replacement and Maintenance .....	19
Section 21-4.5 Rope Replacement and Maintenance .....	19
Section 21-4.6 Web Strap Replacement and Maintenance .....	20
<b>Figures</b>	
21-0.1-1 Lever Hoist — Chain Type .....	2
21-0.1-2 Lever Hoist — Rope .....	3
21-0.1-3 Lever Hoist — Web Strap .....	3
21-0.2-1 Lever Hoist — Chain Type .....	4
21-0.2-2 Load Chain .....	5
21-0.2-3 Guide and Load Sprocket-Strap .....	5
21-0.2-4 Load Controlling Mechanism .....	6
21-0.2-5 Overtravel Restraint .....	6
21-0.2-6 Load Sprockets .....	7
21-1.2.6-1 Swivel Type Hook .....	9
<b>Tables</b>	
21-2.1.4-1 Minimum Frequent Inspection for Lever Hoists .....	12
21-2.1.5-1 Minimum Periodic Inspection for Lever Hoists .....	13