ASME B30.22-2023
(Revision of ASME B30.22-2016)

Articulating Boom Cranes

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

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

ASME B30.22-2023
(Revision of ASME B30.22-2016)

Articulating Boom Cranes

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: June 19, 2023

The next edition of this Standard is scheduled for publication in 2028. This will become effective 1 year after the Date of Issuance.

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 ensure that individuals from competent and concerned interests had an opportunity to participate. The proposed code or standard was made available for public review and comment, which provided an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

ASME does not "approve," "certify," "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 does ASME 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 representatives or persons 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.

The endnotes and preamble in this document (if any) are part of this American National Standard.



ASME Collective Membership Mark

"ASME" and the above ASME symbol are registered trademarks of The American Society of Mechanical Engineers.

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 © 2023 by
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
All rights reserved
Printed in U.S.A.

CONTENTS

Foreword v
Committee Roster vii
Correspondence With the B30 Committee ix
B30 Standard Introduction x
Summary of Changes xii

Chapter 22-0 Scope, Definitions, Personnel Competence, Translations, and References 1
Section 22-0.1 Scope of B30.22 1
Section 22-0.2 Definitions 1
Section 22-0.3 Legend for Figures 22-0.3-1 Through 22-0.3-4 9
Section 22-0.4 Nomenclature for Articulating Cranes 14
Section 22-0.5 Personnel Competence 14
Section 22-0.6 Translations 14
Section 22-0.7 References 14
Chapter 22-1 Construction and Characteristics 16
Section 22-1.1 Load Ratings 16
Section 22-1.2 Boom Lift, Boom Telescoping, and Load Hoist Mechanisms 19
Section 22-1.3 Swing Mechanism 19
Section 22-1.4 Crane Transport 19
Section 22-1.5 Ropes, Rope-Lifting Components, and Reeving Accessories 20
Section 22-1.6 Controls 20
Section 22-1.7 Installation 20
Section 22-1.8 Construction 20
Section 22-1.9 Operating Manual 22
Chapter 22-2 Inspection, Testing, and Maintenance 23
Section 22-2.1 Inspection 23
Section 22-2.2 Testing 24
Section 22-2.3 Maintenance 25
Chapter 22-3 Operation 27
Section 22-3.1 Qualifications and Responsibilities 27
Section 22-3.2 Operating Practices 31
Section 22-3.3 Signals 32
Section 22-3.4 Operation in the Vicinity of Electric Power Lines 33
Section 22-3.5 Miscellaneous 40

Figures
22-0.2.1-1 Commercial Truck-Mounted With Ground Control 2
22-0.2.1-2 Commercial Truck-Mounted With Top Seat Control 3
22-0.2.1-3 Commercial Truck-Rear-Mounted With Remote Control 4

22-0.2.1-4 Crawler-Mounted 4
22-0.2.1-5 Stationary Installation 5
22-0.2.1-6 Railcar Installation 5
22-0.2.1-7 Trailer-Mounted 5
22-0.2.1-8 Traveling Base-Mounted on Trailer 6
22-0.2.1-9 Off-Road Vehicle 6
22-0.3-1 Definitions of Specifications for Articulating Cranes 10
22-0.3-2 Hook Approach 13
22-0.3-3 Elevation Below Horizontal 13
22-0.3-4 Elevation Above Horizontal 13
22-0.4-1 Nomenclature for Articulating Cranes 15
22-1.1.3-1 Work Areas 17
22-3.3.4-1 Standard Hand Signals 34
22-3.4.1-1 Flowchart to Assist in Determination of the Applicable Subsection for Operation in the Vicinity of Power Lines 36
22-3.4.1-2 Specified Clearance Around an Energized Power Line 37
22-3.4.1-3 Specified Clearance Around an Energized Electric Power Line That Shall Be Maintained When the Crane Is in Travel or Transit 38
22-3.4.1-4 Electric Power Line Support Structures 38

Table

22-3.4.1-1 Specified Clearance for Operation in the Vicinity of Energized Electric Power Lines 39