(Revision of ASME B16.49-2017)

## Factory-Made, Wrought Steel, Buttwelding Induction Bends for Transportation and Distribution Systems

AN AMERICAN NATIONAL STANDARD



**ASME B16.49-2023** (Revision of ASME B16.49-2017)

## Factory-Made, Wrought Steel, Buttwelding Induction Bends for Transportation and Distribution Systems

AN AMERICAN NATIONAL STANDARD



Date of Issuance: November 10, 2023

The next edition of this Standard is scheduled for publication in 2028.

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" 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

## **CONTENTS**

Foreword	1	17
Committe	ee Roster	Ţ
Correspoi	ndence With the B16 Committee	v
Summary	of Changes	vii
List of Changes in Record Number Order		iz
1	Scope and Definitions	1
2	Pressure Ratings	2
3	Size	2
4	Marking	2
5	Material	4
6	Material for Bends Containing Welds	5
7	Chemical Composition	5
8	Material Properties	5
9	Heat Treatment	6
10	Qualification Bend	7
11	Test Requirements	8
12	Dimensional Requirements	g
13	Inspection of Production Bends	g
14	Certification	11
SR15	Supplementary Requirements	11
Mandato	ry Appendix	
I	References	13
Nonmano	datory Appendices	
A	Quality System Program	14
В	Induction Bend Data Sheet	15
Figures		
2.2-1	Bend Dimensional Terms	3
8.2-1	Test Specimen Locations and Orientations — Longitudinal Seam	6
8.2-2	Test Specimen Locations and Orientations — Helical Seam	7
12.6-1	Measurement of Bend Angle and Out-of-Squareness	10
Tables		
4.1-1	Tensile Properties	4
5.1-1	Maximum Limits of Chemical Elements That May Be Used	4
10.1-1	Limits on Essential Variables	8