ASME A13.1-2026

(Revision of ASME A13.1-2023)

Scheme for the Identification of Piping Systems

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

ASME A13.1-2026
(Revision of ASME A13.1-2023)

Scheme for the Identification of Piping Systems

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers
Two Park Avenue • New York, NY • 10016 USA

Date of Issuance: July 15, 2026

The next edition of this Standard is scheduled for publication in 2029.

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

All rights reserved. "ASME" and the above ASME symbol are registered trademarks of The American Society of Mechanical Engineers. No part of this document may be copied, modified, distributed, published, displayed, or otherwise reproduced in any form or by any means, electronic, digital, or mechanical, now known or hereafter invented, without the express written permission of ASME. No works derived from this document or any content therein may be created without the express written permission of ASME. Using this document or any content therein to train, create, or improve any artificial intelligence and/or machine learning platform, system, application, model, or algorithm is strictly prohibited.

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

Copyright © 2026 by
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

CONTENTS

Foreword iv
Committee Roster v
Correspondence With the A13 Committee vi
Introduction vii
Summary of Changes viii

1 Scope 1
2 Definitions 1
3 References 1
4 Method of Identification 1

Figures

4.1-1 GHS Pictograms 3
4.1-2 Flow Direction to the Right 4
4.1-3 Flow in Both Directions (Double-Headed Arrow) 4
4.1-4 Flow in Both Directions (Arrows Pointed in Opposite Directions) 4
4.3-1 Horizontal Piping Located Above the Normal Line of Vision 6
4.3-2 Legends on Piping Where a Change in Direction Occurs 6
4.3-3 Legend on Relatively Large-Diameter Pipe 7

Tables

4.2-1 Designation of Colors 5
4.2-2 Standard Non-Safety Colors Gray and Brown 5
4.4-1 Dimensions of Color Fields and Letters in Legends — U.S. Customary Units 7
4.4-1M Dimensions of Color Fields and Letters in Legends — SI Units 7

FOREWORD

This Foreword provides a brief history of how ASME A13.1, Scheme for the Identification of Piping Systems, came to be and how it has evolved over time.

Shortly after the turn of the twentieth century, in a time of rapid industrial expansion, it became apparent that some scheme should be devised to identify piping. In 1908, an article on "Identification of Power House Piping by Colors" was read at a meeting of The American Society of Mechanical Engineers. In 1909, an article called "Standard Colors for Power Station Piping" was read at the meeting of the Association of Edison Illuminating Companies.

In 1920, the National Safety News pointed out the need for a color scheme for piping, and the following year several papers were published and reports made to various committees, notably the Prime Movers Committee of the National Electric Light Association, The American Society of Mechanical Engineers, and the U.S. Navy Department.

In the meantime, many large companies compiled their own scheme with no thought to standardization of pipe colors, even in their own plants. When personnel were shifted, accidents could and did happen as a result.

The American Standards Association [now called the American National Standards Institute (ANSI)] organized the Sectional Committee on the Identification of Piping Systems on June 14, 1922. This committee's efforts resulted in the initial publication of this Standard in 1928.

On August 23, 1950, the committee was reorganized to investigate the possibility of a revision to the Standard. It was felt that a revision was necessary because of the tremendous number of different materials being carried in pipes. After many meetings and much discussion, a revision of American Standard, Scheme for Identification of Piping Systems, was approved by the sectional committee and sponsors. It was then presented to the American Standards Association for approval and designation as an American Standard. This was granted on January 27, 1956.

In the late 1960s, the committee began discussions on the possibility of revising the 1956 standard. These discussions continued for a number of years, eventually resulting in approval by ANSI. The revision was designated as an American National Standard on June 13, 1975.

In accordance with the policy of ANSI, the committee began a review of the 1975 Standard for a possible revision in the late 1970s. This resulted in a revised edition, which was approved by ANSI and designated as an American National Standard on November 16, 1981.

Subsequent editions were approved by ANSI in 1996 and 2007.

The 2015 edition of ASME A13.1 incorporated the GHS pictograms and added a definition for *oxidizing*. ASME A13.1-2015 was approved by ANSI on October 30, 2015.

The 2020 edition of ASME A13.1 made a number of changes, including redesignating some paragraphs, revising most definitions, adding a reference to the GHS, *Globally Harmonized System of Classification and Labelling of Chemicals*, and adding a new paragraph to address abandoned piping. ASME A13.1-2020 was approved by ANSI on September 1, 2020.

The 2023 edition of ASME A13.1 made significant changes, including revising the Scope, updating each of the definitions, expanding the Legend section, and revising both the Color section and Table 4.2-1, Designation of Colors. Also, ASME A13.1 was changed from a periodic-maintenance to a continuous-maintenance Standard. ASME A13.1-2023 was approved by ANSI on August 18, 2023.

This 2026 edition of ASME A13.1 makes substantial changes, including updating the Scope, adding wastewater and abandoned piping to Table 4.2-1, adding Table 4.2-2, modernizing Figure 4.3-1's graphics and adding Figures 4.3-2 and 4.3-3, and revising Table 4.4-1 and adding Table 4.4-1M. ASME A13.1-2026 was approved by ANSI on June 9, 2026.

ASME A13 COMMITTEE
Scheme for the Identification of Piping Systems

(The following is the roster of the committee at the time of approval of this Standard.)

STANDARDS COMMITTEE OFFICERS

F. Tatar, *Chair*
R. Mohamed, *Staff Secretary*

STANDARDS COMMITTEE PERSONNEL

A. Bhanu K., The Piping Institute (India)
J. Ciba, Signode Industrial Group, LLC
C. Eskridge, Becht
A. Esmaeili, Australian Gas Infrastructure Group
M. Fan, Air Products & Chemicals, Inc.
D. Frikken, Engineering Consulting
J. Hamedi, South Australia Water Corp.
W. Huitt, W. M. Huitt Co.
R. M. Jimenez, Visual Graphic Systems, Inc.
B. Martinez Reyes, Flowserve
R. Mohamed, The American Society of Mechanical Engineers
A. Mukherjee, ST Energy Co., LLC
R. Severinsen, Marking Services, Inc.
T. Smith, Swift Technical Services, LLC
F. Tatar, Consultant
H. Toki, Bechtel India Pvt, Ltd.
P. Velpula, Honeywell UOP

CORRESPONDENCE WITH THE A13 COMMITTEE

General. ASME codes and standards are developed and maintained by committees with the intent to represent the consensus of concerned interests. Users of ASME codes and standards may correspond with the committees to propose revisions or cases, report errata, or request interpretations. Correspondence for this Standard should be sent to the staff secretary noted on the committee's web page, accessible at https://go.asme.org/A13committee.

Revisions and Errata. The committee processes revisions to this Standard on a continuous basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published in the next edition of the Standard.

In addition, the committee may post errata on the committee web page. Errata become effective on the date posted. Users can register on the committee web page to receive email notifications of posted errata.

This Standard is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number, the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases. The committee does not issue cases for this Standard.

Interpretations. Upon request, the committee will issue an interpretation of any requirement of this Standard. An interpretation can be issued only in response to a request submitted through the online Inquiry Submittal Form at https://go.asme.org/InterpretationRequest. Upon submitting the form, the inquirer will receive an automatic email confirming receipt.

ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the information submitted, it is the opinion of the committee that the inquirer should seek assistance, the request will be returned with the recommendation that such assistance be obtained. Inquirers can track the status of their requests at https://go.asme.org/Interpretations.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME committee or subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Interpretations are published in the ASME Interpretations Database at https://go.asme.org/Interpretations as they are issued.

Committee Meetings. The A13 Standards Committee regularly holds meetings that are open to the public. Persons wishing to attend any meeting should contact the secretary of the committee. Information on future committee meetings can be found on the committee web page at https://go.asme.org/A13committee.

INTRODUCTION

PURPOSES OF STANDARDIZATION

Schemes for identification of the contents of piping systems have been developed in the past by a large number of industrial plants and organizations of various kinds. Generally speaking, the standards arrived at in individual cases have given satisfaction to those using them but they also have suffered from a lack of uniformity. Mistakes made in turning valves on or disconnecting pipes at the wrong time or place have resulted in numerous injuries to personnel and damage to property. In particular, these sorts of mistakes have been made when outside agencies, such as municipal fire departments, were called in to assist. Furthermore, there has been considerable confusion for people who change employment from one plant to another.

In order to promote greater safety and lessen the chances of error, confusion, or inaction, especially in times of emergency, a uniform system for the identification of piping contents has been established to warn personnel when the piping contents are inherently hazardous. Therefore, while this Standard has been prepared to specify the identification of the contents of piping systems on the basis of legends, it also suggests the use of color as a supplementary means of identifying the type of hazard of the material contained in the system.

METRIC CONVERSIONS

This Standard contains U.S. Customary and SI (metric) units. Either system may be used to meet the requirements of this Standard.