

Piping Identification — Basic Detail P29.3

The identification of the piping systems and services that comprise a plumbing system is an important element in the overall design. Identification not only gives the building occupants an awareness of the products being conveyed through their environment, but it gives the maintenance staff and contractors the ability to trace the systems easily when repairs or renovations are needed. A properly specified and installed piping-identification system can be a priceless facet of the plumbing system to a building operator/owner, but an inadequate system is a waste of money.

The Occupational Safety and Health Administration (OSHA) standards outline the employees' and employers' "right to know." OSHA references the ANSI/ASME A13.1 standard scheme for pipe identification as its recommended guideline. The purpose of the ANSI/ASME standard is to "assist in the identification of materials conveyed in piping systems and their hazards when released in the environment." Pipes are defined as "conduits for the transport of gases, liquids, semi-liquids or fine particulate dust." The ANSI/ASME standard not only "specifies 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." The ANSI/ASME standard has three basic classifications of systems:

- Materials inherently hazardous-flammable, explosive, chemically active or toxic, extreme temperature/pressure, radioactive.
- Materials of inherently low hazard-liquid or liquid admixture, gas or gaseous admixture.
- Fire-quenching materials-water, foam, CO₂, halon, etc.

The typical pipe identification detail shown here was developed in accordance with the guidelines prescribed by ANSI/ASME standard A13.1. The most current edition is 1996. Copies can be obtained from the publisher,

"The Plumbing Designer's Basic Details" series, previously published in Plumbing Engineer beginning in 1973, is currently being reviewed, updated and expanded by ASPE's Technical and Research Committee. This installment is provided by committee member Timothy A. Smith, CIPE/CPD.

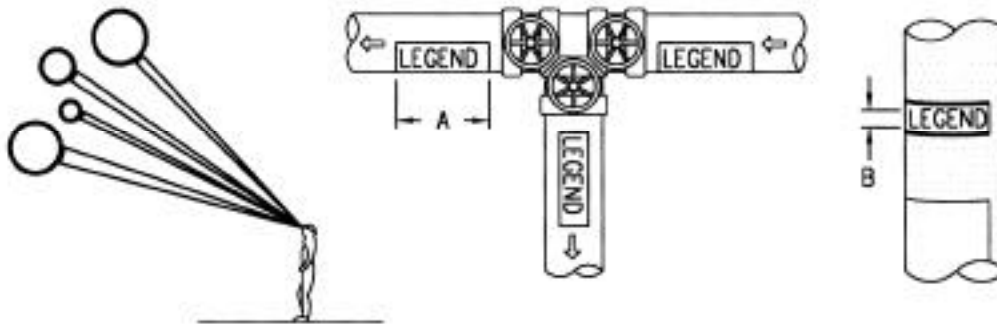
American National Standards Institute (ANSI), Inc., 11 West 42nd Street, New York, NY 10036 (see also www.ansi.org). Also, many manufacturers of identification systems have catalogs that contain useful information and identification schemes.

Some issues to consider:

1. Does the client have a master system of pipe identification that we should be using, which also complies with the intent of ANSI?
2. Is this application to be an addition to an existing building/system that already has established legends and colors that should be followed to avoid confusion?
3. Is there a type of label that best suits the application (preformed, self-adhesive, stencil, other)?
4. Does my specification properly instruct the contractor regarding cleaning of the pipe/insulation surfaces, prior to installation of the identification system?
5. Has the contractor been given enough time to order both the normal legend markers and other special legends, as these sometimes create delays at the end of a project?

Be sure to read the April issue of *Plumbing Engineer*, which will follow up with a typical valve tag detail and valve chart format. □

Refer to the ASPE Data Book for design information concerning the design of plumbing and related systems. ASPE makes no guarantees or warranties, expressed or implied, regarding the data and information contained in this publication.



NOTE:

IDENTIFICATION MARKERS OR STRIPS TO BE PLACED ON ALL EXPOSED COVERED AND UNCOVERED PIPES AT 50'-0" INTERVALS AND AT ALL VALVES, BRANCHES, CHANGE IN DIRECTION OF FLOW AND ON BOTH SIDES OF WALLS WHERE PIPES PASS THROUGH SAME. ARROWS OF SAME COLOR AS IDENTIFICATION MARKERS SHALL ALSO BE PLACED ON PIPES POINTING AWAY FROM MARKER INDICATING DIRECTION OF FLOW.

SIZE OF LEGEND LETTERS

OUTSIDE DIAMETER OF PIPE OR COVERING		LENGTH OF COLOR FIELD A		SIZE OF LETTERS B	
INCHES	MM	INCHES	MM	INCHES	MM
3/4" TO 1-1/4"	19 TO 32	8"	200	1/2"	13
1-1/2" TO 2"	38 TO 51	8"	200	3/4"	19
2"-1/2" TO 6"	64 TO 150	12"	300	1-1/4"	32
8" TO 10"	200 TO 250	24"	600	2-1/2"	64
OVER 10"	OVER 250	32"	800	3-1/2"	89

SERVICE	BACKGROUND OR COLOR BAND	IDENTIFICATION MARKER
DOMESTIC COLD WATER	GREEN	WHITE ON GREEN
DOMESTIC HOT WATER	YELLOW	BLACK ON YELLOW
DOMESTIC HOT WATER RETURN	YELLOW	BLACK ON YELLOW
FIRE PROTECTION (SPRINKLER)	RED	WHITE ON RED
NATURAL GAS	YELLOW	BLACK ON YELLOW
SANITARY DRAIN	GREEN	WHITE ON GREEN
STORM WATER	GREEN	WHITE ON GREEN

TYPICAL PIPE IDENTIFICATION DETAIL

NO SCALE



STANDARD DETAIL

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