

SECTION 400597 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Equipment labels
2. Warning signs and labels
3. Pipe labels

1.02 SUBMITTAL

A. Product Data: For each type of product indicated.

1.03 BUY AMERICAN REQUIREMENTS

- A. Provide certificates to show that all products meet the following requirements.
 - a. American Iron and Steel (AIS)
 - b. Build America, Buy America Act
- B. See Supplementary Conditions for details.

PART 2 – PRODUCTS

2.01 EQUIPMENT AND VALVE LABELS

A. Plastic Labels for Equipment:

1. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/16 inch thick, and having predrilled holes for attachment hardware.
2. Letter Color: Black
3. Background Color: White
4. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
5. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
6. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
7. Fasteners: Stainless-steel rivets or self-tapping screws.
8. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

B. Label Content: Include equipment's Drawing designation or unique equipment number, drawing numbers where equipment is indicated (plans, details, and schedules), plus the Specification Section number and title where equipment is specified.

C. Equipment Label Schedule: For each item of equipment to be labeled, on 8-1/2-by-11-inch

bond paper. Tabulate equipment identification number and identify Drawing numbers where equipment is indicated (plans, details, and schedules), plus the Specification section number and title where equipment is specified. Equipment schedule shall be included in operation and maintenance data.

2.02 WARNING SIGNS AND LABELS

- A. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/16 inch thick, and having predrilled holes for attachment hardware.
- B. Letter Color: Black
- C. Background Color: White
- D. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
- E. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
- F. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
- G. Fasteners: Stainless-steel rivets or self-tapping screws.
- H. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- I. Label Content: Include caution and warning information, plus emergency notification instructions.

2.03 PIPE LABELS

- A. General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service, and showing flow direction.
- B. Pre-tensioned Pipe Labels: Pre-coiled, semi-rigid plastic formed to cover full circumference of pipe and to attach to pipe without fasteners or adhesive.
- C. Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.
- D. Pipe Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings, pipe size, and an arrow indicating flow direction.
 - 1. Flow-Direction Arrows: Integral with piping system service lettering to accommodate both directions, or as separate unit on each pipe label to indicate flow direction.
 - 2. Lettering Size: At least 1-1/2 inches high

PART 3 – EXECUTION

3.01 PREPARATION

- A. Clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, and encapsulants.

3.02 EQUIPMENT AND VALVE LABEL INSTALLATION

- A. Install or permanently fasten labels on each major item of mechanical equipment and valves with tags numbering per design drawings.
- B. Locate equipment labels where accessible and visible.

3.03 PIPE LABEL INSTALLATION

- A. Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:
 - 1. Near each valve and control device.
 - 2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
 - 3. Near penetrations through walls, floors, ceilings, and inaccessible enclosures.
 - 4. At access doors, manholes, and similar access points that permit view of concealed piping.
 - 5. Near major equipment items and other points of origination and termination.
 - 6. Spaced at maximum intervals of 50 feet along each run. Reduce intervals to 25 feet in areas of congested piping and equipment.
- B. Pipe Label Color Schedule:
 - 1. Potable Water Piping:
 - a. Background Color: White
 - b. Letter Color: Black
 - 2. Valves:
 - c. Background Color: White
 - d. Letter Color: Black
 - 3. Major Equipment:
 - e. Background Color: White
 - f. Letter Color: Black

3.04 SAMPLE TAP IDENTIFICATION

- A. General: Identify all sample taps with tags (raw, treated, finished, potable, etc.)

B. Use: Tags, stamped metal or engraved laminate, with sample tap identification, attached with chain or nylon tie so as not to interfere with tap operation.

C. As-Built Drawings: Show sample tap ID designations thereon.

3.05 TANK/SAFETY SIGNAGE

A. General: Identify all bulk storage tanks; contents, volume, hazards (if any). Identify all safety concerns and personal protective equipment (PPE) requirements.

B. Use: Safety and tank signage material will be selected to provide appropriate surface adhesion (i.e. adhesive vinyl suited to plastic tanks, foam adhesive backing suited to cinder block, aluminum or steel to be fastened with screws, etc). Pressure-sensitive markers/signs, suitable for tank materials and contours.

C. Location, Orientation: Tank signage to be positioned where signage is readily visible on tank sides. Safety- type signage to be located at entrances to specified areas, or adjacent to equipment or hazard.

END OF SECTION