**SECTION 15190 (22 05 53)**

**IDENTIFICATION for PLUMBING PIPING and EQUIPMENT**

**PART 1 GENERAL**

1. SECTION INCLUDES
   1. Nameplates
   2. Tags
   3. Stencils
   4. Pipe Markers
   5. Pipe Color Coding
2. REFERENCES
   1. ASME A13.1 ‑ Scheme for the Identification of Piping Systems
3. SUBMITTALS
   1. Submit under provisions of Section 01 33 00.
   2. Submit list of wording, symbols, letter size, and color-coding for plumbing identification.
   3. Submit valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
   4. Product Data: Provide manufacturer's catalog literature for each product required.
   5. Manufacturer Installation Instructions: Indicate special procedures and installation.
4. PROJECT RECORD DOCUMENTS
   1. Submit under provisions of section 01 77 00.
   2. Provide a written record of the actual locations of tagged valves.

**PART 2 PRODUCTS**

1. NAMEPLATES
   1. Description, provide a laminated 3-layer plastic with engraved black letters on light contrasting background color.
2. TAGS
   1. Plastic Tags, provide a laminated 3-layer plastic with engraved black letters on light contrasting background color, tag size minimum 1½" diameter.
   2. Metal Tags, provide brass with stamped letters; tag size minimum 1½" diameter with smooth edges.
   3. Chart, provide a typewritten letter size list in anodized aluminum frame.
3. STENCILS
   1. Stencils, with clean cut symbols and letters of following size:

OUTSIDE DIAMETER OF LENGTH OF SIZE OF

INSULATION OR PIPE COLOR FIELD LETTERS

¾" ‑ 1¼" 8" ½"

1½" ‑ 2" 8" ¾"

2½" ‑ 6" 12" 1‑1/4"

8" ‑ 10" 24" 2½"

Over 10" 32" 3½"

Ductwork and Equipment --- 2½"

* 1. Stencil Paint, as specified in Section 09 90 00, semi-gloss enamel, with colors conforming to ASME A13.1.

1. PIPE MARKERS:
   1. Color shall conform to ASME A13.1.
   2. Plastic Pipe Markers:
      1. Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering.
      2. Minimum information indicating direction of flow arrow and identification of fluid conveyed.
   3. Plastic Tape Pipe Markers provide flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.
   4. Underground Plastic Pipe Markers shall be bright colored continuously printed plastic ribbon tape, minimum 6" wide by 4-mil thick, manufactured for direct burial service.
2. COLOR STICK-ONS ON CEILING GRID
   1. Install self-adhesive color ¾" squares on ceiling grid or on access panels to designate locations of concealed plumbing equipment, color code as follows:
      1. Green - Plumbing water valves
      2. Blue – HVAC equipment
      3. Red – HVAC piping specialties, valves, gauges, etc.
   2. Self-adhesive color ¾" diameter dots shall be installed on ceiling grid or on access panels to designate locations of concealed equipment color coded as follows:
      1. Purple – energy management and control systems
      2. Colors for other trades - see Section 26 05 53
3. PIPE COLOR CODING
   1. Paint all exposed HVAC piping in finished areas the appropriate color in accordance with specification sections 09 91 13 or 09 91-23 Painting, and 22 10 00 Plumbing Piping, 21 00 00 Fire Suppression.
   2. The piping colors code is as follows:
      1. Fire Sprinkler Piping – Red
      2. Gas Piping – Yellow
      3. Compressed Air - Orange

**PART 3 EXECUTION**

1. PREPARATION
   1. Degrease and clean surfaces to receive adhesive for identification materials.
   2. Prepare surfaces in accordance with Section 09 90 00 for stencil painting.
2. INSTALLATION
   1. Install plastic nameplates with corrosive-resistant mechanical fasteners, or adhesive.
      1. Apply with sufficient adhesive to ensure permanent adhesion.
   2. Install tags with corrosion resistant chain.
   3. Apply stencil painting in accordance with Section 09 90 00.
   4. Install plastic pipe markers in accordance with manufacturer's instructions.
   5. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.
   6. Install underground-metalized plastic pipe markers 6 to 8" below finished grade, directly above buried pipe.
   7. Identify air handling units, pumps, heat transfer equipment, tanks, and water treatment devices with plastic nameplates.
      1. Contractor may identify small devices, such as in-line pumps, with tags.
   8. Identify control panels and major control components outside panels with plastic nameplates.
   9. Identify valves in main and branch piping with tags.
   10. Identify piping, concealed or exposed, with stenciled painting.
       1. Use tags on piping ¾" diameter and smaller.
       2. Identify service, flow direction, and pressure.
       3. Install in clear view and align with axis of piping.
       4. Locate identification not to exceed 20' on straight runs including risers and drops, adjacent to each valve and Tee, at each side of penetration of structure or enclosure, and at each obstruction.
       5. Paint gas-piping yellow for the entire length of the piping above ground.
   11. Provide color-coded ceiling stick-on to locate valves above T-bar type panel ceilings.
       1. Locate stick-on, on ceiling grid T-bars closest to equipment.
   12. Paint all exposed plumbing piping with appropriate color.

END OF SECTION