
SECTION 21 05 53**FIRE PROTECTION IDENTIFICATION FOR PIPING AND EQUIPMENT****PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Nameplates.
- B. Tags.
- C. Pipe markers.

1.2 RELATED REQUIREMENTS

- A. Section 09 91 23 - Interior Painting: Stencil paint.
- B. Section 21 05 00 - Fire Protection Common Work Results; for Administrative Requirements and Closeout Submittals.
- C. Section 21 05 00 - Fire Protection Common Work Results; for Piping, Valves, Meters and Gauges
- D. Section 21 13 00 - Fire Protection Fire-Suppression Sprinkler Systems

1.3 REFERENCE STANDARDS

- A. ASME A13.1 - Scheme for the Identification of Piping Systems 2020.
- B. ASTM D709 - Standard Specification for Laminated Thermosetting Materials 2017.

1.4 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. See Section 21 05 00 - Fire Protection Common Work Results; for submittal procedures.
- C. List: Submit list of wording, symbols, letter size, and color coding for mechanical identification.
 - 1. Pipe List (21 05 53 - 002 - A)
- D. Chart and Schedule: Submit valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
 - 1. Valve Chart (21 05 53 - 002 - A)
- E. Product Data: Provide manufacturers catalog literature for each product required.
 - 1. Name Plate (21 05 53 - 003 - A)
 - 2. Tags (21 05 53 - 004 - A)
 - 3. Pipe Markers (21 05 53 - 005 - A)
- F. Manufacturer's Installation Instructions: Indicate special procedures, and installation instructions.
- G. Project Record Documents: Record actual locations of tagged valves.
 - 1. Refer to Section 21 05 00 - Fire Protection Common Work Results; for Closeout Submittals
 - 2. Record Documents (21 05 00 - 005 - A)

PART 2 PRODUCTS**2.1 IDENTIFICATION APPLICATIONS**

- A. Automatic Controls: Tags.
 - B. Instrumentation: Tags.
 - C. Major Control Components: Nameplates.
 - D. Piping: Tags.
 - E. Valves: Nameplates and ceiling tacks where above lay-in ceilings.
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2.2 NAMEPLATES

- A. Letter Height: 1/4 inch.
- B. 3"x5" minimum size, Plastic two layers, with engraving depth to the inner layer.
 - 1. Where piping schedules are indicated on plans, follow system colors.
 - 2. Where system does not exist, outer layer blue, inner layer white.
- C. 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.
- D. 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.
- E. Label Content: Include caution and warning information, plus emergency notification instructions.

2.3 TAGS

- A. Metal Tags: Brass with stamped letters; tag size minimum 2 inch diameter with smooth edges.
- B. Valve Tag Chart: Typewritten letter size list in anodized aluminum frame. Submit as electronic PDF with O&M Manual

2.4 PIPE MARKERS

- A. Plastic Pipe Markers: Factory fabricated, flexible, semi- rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.
- B. Color code as follows:
 - 1. Where piping schedules are indicated on plans, follow system colors.
 - 2. Where system does not exist follow ASME A13.1

2.5 CEILING TACKS

- A. Description: Steel with 3/4 inch diameter color coded head.
- B. Color code as follows:
 - 1. Equipment: Yellow.
 - 2. Valves: Blue.

PART 3 EXECUTION**3.1 PREPARATION**

- A. Degrease and clean surfaces to receive adhesive for identification materials.

3.2 INSTALLATION

- A. Install nameplates with corrosive-resistant mechanical fasteners, or adhesive. Apply with sufficient adhesive to ensure permanent adhesion and seal with clear lacquer.
 - B. Install tags with corrosion resistant chain.
 - C. Install plastic pipe markers in accordance with manufacturer's instructions. Locate identification not to exceed 40 feet 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.
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- D. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.
- E. 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.
- F. Locate ceiling tacks to locate valves above T-bar type panel ceilings. Locate in corner of panel closest to equipment.

3.3 APPLICATION

- A. Nameplates:
 - 1. Equipment scheduled on Construction Documents.
- B. Tags:
 - 1. Piping Accessories not receiving a nameplate.

END OF SECTION 21 05 53