

## **SECTION 22 05 53 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Equipment labels.
  - 2. Pipe labels.
  - 3. Valve tags.
  - 4. Warning tags.
  - 5. Ceiling Nameplates.

#### **1.3 ACTION SUBMITTALS**

- A. Product Data: For each type of product indicated.
- B. Samples: For color, letter style, and graphic representation required for each identification material and device.
- C. Equipment Label Schedule: Include a listing of all equipment to be labeled with the proposed content for each label.
- D. Valve numbering scheme.
- E. Valve Schedules: For each piping system to include in maintenance manuals.

#### **1.4 COORDINATION**

- A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- B. Coordinate installation of identifying devices with locations of access panels and doors.
- C. Install identifying devices before installing acoustical ceilings and similar concealment.

### **PART 2 - PRODUCTS**

#### **2.1 EQUIPMENT LABELS**

- A. Labels for Equipment:

1. Material and Thickness: Laminated phenolic plastic, 1/16-inch minimum thickness, and having predrilled or stamped holes for attachment hardware. Black surface, white core.
  2. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
  3. Minimum Letter Size: 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Fasteners: Stainless-steel rivets or self-tapping screws.
  4. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- B. Label Content: Include equipment's unique equipment number
- 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 Equipment schedule shall be included in operation and maintenance data.
- D. Equipment Naming Method: The following criteria shall be used for valve naming:
1. (equipment type)-(terminal)-(terminal level)-(horizontal column)-(vertical column)(number of similar pieces of equipment)
    - a. Equipment Type: (To be coordinated with DFW)
    - b. Terminal Level (1=Ramp, 2=Concourse, 3= 3<sup>rd</sup> Level)
    - c. Horizontal Column (A, B, C, D, E, etc.)
    - d. Vertical Column (1, 2, 3, etc.)
    - e. Number of pieces (A=1, B=2, etc.)

Example:

"HWP-A-2-C-50A"

## **2.2 CEILING NAMEPLATES**

- A. All equipment installed above ceiling shall have a ceiling nameplate
- B. Nameplates shall be white micarta with engraved 1/4-inch high black letters.
- C. Refer to equipment naming method above.
- D. Nameplates to be 2-inches long and pop riveted to the bottom of the nearest visible ceiling grid tee. Width of nameplate to match width of grid.

## **2.3 PIPE LABELS**

- A. Pretensioned Pipe Labels: Pre-coiled, semi-rigid plastic formed to cover full circumference of pipe and attach to pipe without fasteners or adhesives.
- B. Pipe Label Contents: Include identification of piping service 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: 1 inch high (Less than 3-inch pipe), 2 inch high (3-inch pipe and greater).

3. Pipe Size: (inches)

C. Pipe Label Table

<b>PLUMBING PIPE LABELS</b>			
<b>SERVICE</b>	<b>MARK</b>	<b>LETTERING COLOR</b>	<b>BACKGROUND COLOR</b>
Domestic 140 Deg. F hot water supply	X IN DOM-140 HWS	WHITE	GREEN
Domestic 120 Deg. F hot water supply	X IN DOM-120 HWS	WHITE	GREEN
Domestic Tempered 110 Deg. F water supply	X IN DOM-110 HTS	WHITE	GREEN
Domestic Tempered 85 Deg. F water for Eye Wash	X IN DOM-85 HTS	WHITE	GREEN
Domestic 120 Deg. F hot water return	X IN DOM-120 HWR	WHITE	GREEN
Domestic cold water supply	X IN DOM-CWS	WHITE	GREEN
Concession cold water supply	X IN DOM-CCWS	WHITE	GREEN
Sanitary Sewer - Gravity	X IN SAN	WHITE	GREEN
Sanitary Sewer Vent	X IN VENT	WHITE	GREEN
Sanitary Sewer - Pumped	X IN SAN-PUMP	WHITE	GREEN
Grease Waste	X IN GREASE	BLACK	WHITE
Grease Waste - Pumped	X IN GREASE-PUMP	BLACK	WHITE
Cooking Oil	X IN COOK OIL	BLACK	WHITE
Storm Drain	X IN STORM	WHITE	GREEN
Storm Drain Overflow	X IN STORM OVERFLOW	WHITE	GREEN
Transformer Oil Interceptor	X IN WASTE OIL	BLACK	YELLOW
Drain	X IN DRAIN	WHITE	GREEN
Condensate Drain-Gravity	X IN CD	WHITE	GREEN
Pumped Condensate Drain	CD-PUMP	WHITE	GREEN
Medium Pressure Gas - 10 psig	X IN 10 PSIG MPG	BLACK	YELLOW
Low Pressure Gas - 7" W.G.	X IN 7" LPG	BLACK	YELLOW
X IS THE PIPE SIZE, INCHES			

## 2.4 VALVE TAGS

- A. Valve Tags: Stamped or engraved with 1/4-inch letters for piping system abbreviation and 1/2-inch numbers.
  1. Tag Material: Brass, 2-inch minimum diameter, 0.125-inch minimum thickness, and having predrilled or stamped holes for attachment hardware.
  2. Fasteners: Brass wire-link or beaded chain; or S-hook.
- B. Valve Schedules: For each piping system, on 8-1/2-by-11-inch bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses.

1. Valve-tag schedule shall be included in operation and maintenance data.
- C. Valve Naming Method: The following criteria shall be used for valve naming:  
(system descriptor)-(valve number)-(terminal designator)

Example:

"DOM-HW-S-1-A"

## **2.5 WARNING TAGS**

- A. Warning Tags: Preprinted or partially preprinted, accident-prevention tags, of plasticized card stock with matte finish suitable for writing.
  1. Size: 3 by 5-1/4 inches minimum.
  2. Fasteners: Brass grommet and wire.
  3. Nomenclature: Large-size primary caption such as "DANGER," "CAUTION," or "DO NOT OPERATE."
  4. Color: Yellow background with black lettering.

## **PART 3 - EXECUTION**

### **3.1 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.

### **3.2 EQUIPMENT LABEL INSTALLATION**

- A. Install or permanently fasten labels on each major item of mechanical equipment.
- B. Locate equipment labels where accessible and visible.
- C. All equipment installed above ceilings shall have ceiling nameplates.

### **3.3 PIPE LABEL INSTALLATION**

- A. Locate pipe labels as follows:
  1. Near each valve and control device.
  2. Near each branch connection, excluding short takeoffs for fixtures and terminal units.
  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 20 feet along each run. Reduce intervals to 10 feet in areas of congested piping and equipment and concealed spaces.
7. Provide arrow marker at each label indicating direction of flow.

### **3.4 VALVE-TAG INSTALLATION**

- A. Install tags on valves and control devices in piping systems, except check valves; valves within factory-fabricated equipment units; shutoff valves; faucets; convenience and lawn-watering hose connections; and similar roughing-in connections of end-use fixtures and units. List tagged valves in a valve schedule.

### **3.5 WARNING-TAG INSTALLATION**

- A. Write required message on, and attach warning tags to, equipment and other items where required.

**END OF SECTION**

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