

SECTION 230553 - IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1-GENERAL

1.1 SECTION INCLUDES

- A. Mechanical identification methods, materials and devices.

1.2 SUBMITTALS

- A. Submit shop drawings and product data per applicable Division I Specification.
- B. Shop drawings shall include product data noting materials, sizes, and dimensions for identification systems.
- C. Submittals are required of valve schedules.

1.3 QUALITY ASSURANCE

- A. Identification requirements shall meet ASME A13.1.

1.4 WARRANTY

- A. Contractor shall warranty entire systems and equipment for a period of one (1) year.

PART 2-PRODUCTS

2.1 COMPONENTS

- A. Equipment Nameplates: Aluminum, permanently fastened to equipment, engraved or stamped.
- B. Stencils: Standard stencils shall be black enamel on a white background or white enamel on a dark background.
- C. Snap-on Plastic Pipe Markers: Preprinted, semi-rigid type, color-coded.
- D. Pressure-Sensitive Pipe Markers: Preprinted, color-coded, vinyl type with permanent adhesive.

PIPE	CODE	COLOR
Heating Hot Water Supply	HHWS	GREEN
Heating Hot Water Return	HHWR	GREEN
Chilled Water Supply	CHWS	GREEN
Chilled Water Return	CHWR	GREEN
Refrigeration Piping (Suction)	REF (S)	GREEN
Refrigeration Piping (Hot Gas)	REF (HG)	GREEN
Refrigeration Piping (Liquid)	REF (L)	GREEN
A/C Condensate	A/C COND	BROWN
Boiler Blow Down	BBD	BLACK

- E. Pipe Markers: Full band type.
- F. Plastic Duct Markers: Laminated plastic, color coded, and engraved with the service.
- G. Plastic Tape: Color-coded, pressure-sensitive, self-adhesive vinyl.
- H. Valve Tags: Polished tags with numbers and letters.
 - 1. HVAC Systems:
 - a. CHW – Chilled Water
 - b. HHW – Hot Water Heating
- I. Access Panel Markers: Engraved plastic laminate.
- J. Engraved Plastic-Laminate Signs: Sizes required to contain message.
- K. Plastic Equipment Markers: Standard color-coded, laminated plastic.
- L. Plasticize Tags: Preprinted, accident prevention.
- M. Valve Location Tags/labels for concealed equipment: All labels 1/2"x3" or larger plastic laminate with engraved 3/16" high and attached to the ceiling grid. The labels shall have the mark number and valve tag number. Standard colors and labeling are as follows:

<u>EQUIPMENT</u>	<u>COLOR</u>	<u>LABEL</u>
VAVs, Heat Pumps, etc.	Black/White letters	(VAV A – 01)
HVAC Cold Water Valves	Green/White letters	(CWS/CWR – 01)
HVAC Hot Water Valves	Green/White letters	(HWS/HWR – 01)
Fire/Smoke Dampers	Red/White letters	

2.2 VALVE CHARTS

- A. Valve charts shall be furnished by each respective Contractor and shall include the following items:
 - 1. Valve identification
 - 2. Location
 - 3. Purpose
- B. Valve charts shall be included in the Maintenance and Operating Manuals.

PART 3-EXECUTION

3.1 PREPARATION

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

3.2 INSTALLATION

- A. Piping, equipment and valve identification shall be completed prior to issuance of substantial completion.
- B. Plastic Nameplates: Install with corrosive-resistant mechanical fasteners, or adhesive.
- C. Equipment: Identify air handling units, fan powered VAV boxes, and VAV boxes, VFD's, damper locations, duct smoke detectors, chillers, duct reheat coils, water heaters, pumps, and fans with plastic nameplates. Pumps must be identified with metal tags.
- D. Controls: Identify control panels and major control components outside panels with plastic nameplates.
- E. Install plastic pipe markers in accordance with manufacturer's instructions.
- F. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.
- G. Install underground plastic pipe markers 6 to 8 inches below finished grade, directly above buried pipe.
- H. Identify all disconnects and starters related to HVAC, Plumbing and Fire Protection equipment.
- I. Identify piping, concealed or exposed with plastic tape pipe markers. Use tags on piping 3/4 Inch diameter and smaller. Identify service and flow direction. Install in clear view and align with axis of piping. Locate identification not to exceed 20 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. Identify pressure of high temperature hot water in addition to service, flow direction and temperature.
- J. Provide ceiling tacks to locate items specified above T-bar type panel ceilings. Locate in corner of panel closest to equipment.
- K. On ducts with flexible wrap insulation, mark manual volume damper quadrant locations with fluorescent spray paint on insulation.
- L. On ductwork to receive tagging, mark locations of items mounted in ducts on insulation.

END OF SECTION 230553

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