

## SECTION 15230 - MECHANICAL IDENTIFICATION

## PART 1 – GENERAL

## 1.01 PIPE IDENTIFICATION

- A. All piping in mechanical spaces, in unfinished space, and above lift out ceilings, shall be identified with pressure-sensitive pipe markers with color bands of the proper size. Markers shall have proper legend and meet OSHA Specifications and the latest requirements of ANSI A13.1. Where pipes are too small for such application, a 1-1/2" brass tag shall be used. Do not identify exposed piping in the finished areas.
- B. Markers shall be applied to the piping at the following locations:
  - 1. Adjacent to each valve.
  - 2. At each branch and riser take-off.
  - 3. At each pipe passage through wall, floor and ceiling construction.
  - 4. At each pipe passage to underground.
  - 5. At not more than 40'-0" spacing on straight pipe runs.
- C. Markers shall be placed so as to be easily read. Arrows shall be applied to indicate direction of flow.

## 1.02 DAMPER, VALVE AND EQUIPMENT IDENTIFICATION

- A. Provide brass tags for all valves with legend describing function of each valve. Tag shall also indicate normally open or normally closed.
- B. Provide nameplates for all mechanical equipment.
- C. Provide damper tags on each balancing damper located in Ventilating (Indoor Air Quality) Air System.

## 1.03 HVAC AND REFRIGERATION EQUIPMENT

- A. A permanent factory applied nameplate(s) shall be affixed to equipment on which shall appear in legible lettering, the manufacturer's name or trademark, the model number, the serial number, and the seal or mark of the testing agency. A label shall also include the following:
  - 1. Electrical Equipment: Electrical rating in volts, amperes, and motor phase; identification of individual electrical components in volts, amperes or watts, motor phase, BTU output, and required clearance (if clearances are specified).
  - 2. Absorption Units: Hourly rating in BTU; minimum hourly rating for units having step or automatic modulating controls; type of fuel, type of refrigerant; cooling capacity in BTU, and required clearance (if clearances are specified).
  - 3. Heating, Cooling, and Refrigeration Appliances: Name and trademark of the manufacturer; the catalog (model) number or equivalent, the electric rating in volts, amperes, and phase; BTU output rating; Amount and type of refrigerant; design pressures applied; individual marking for each electrical component in volts, amperes or watts, and phase; required clearances from combustibles; a seal indicating approval of the appliance by an approved testing agency.

## PART 2 – PRODUCTS

## 2.01 VALVE TAGS

- A. Brass tags shall be minimum of 2" diameter to accommodate 1/2" high numbers and 1/4" high letters. Tag shall be equipped with a brass chain, monel meter seal, or brass "S" hook.

## 2.02 PIPE MARKERS & BANDS

- A. Markers and band sizes shall conform to the following:

| <u>OUTSIDE DIAMETER<br/>OF PIPE OR INSULATION</u> | <u>LENGTH OF<br/>COLOR FIELD</u> | <u>LETTERING<br/>HEIGHT</u> |
|---|----------------------------------|-----------------------------|
| 3/4" to 1-1/4"                                    | 8"                               | 1/2"                        |
| 1-1/2" to 2"                                      | 8"                               | 3/4"                        |
| 2-1/2" to 6"                                      | 12"                              | 1-1/4"                      |
| 8" to 10"   | 24"                              | 2-1/2"                      |
| Over 10"  | 32"                              | 3-1/2"                      |

- B. Marker and band colors, and marker legends shall conform to the following.

| <u>PIPING SYSTEM</u>     | <u>LEGEND</u>    | <u>BAND/LETTER COLOR</u> |
|--------------------------|------------------|--------------------------|
| 1. DOMESTIC WATER SYSTEM |                  |                          |
| Cold Water               | Cold Water       | Green/White              |
| Hot Water                | Hot Water        | Yellow/Black             |
| Hot Water Return         | Hot Water Return | Yellow/Black             |
| 2. HEATING PIPING SYSTEM |                  |                          |
| Hot Water Supply         | Heating Supply   | Yellow/Black             |
| Hot Water Return         | Heating Return   | Yellow/Black             |
| 4. SANITARY SEWER SYSTEM |                  |                          |
| Sanitary Waste           | Sanitary Sewer   | Green/White              |
| Sanitary Vent            | Plumbing Vent    | Green/White              |

- C. Arrows shall be of same color as bands and shall be point in direction of flow, and indicate normal working pressure.
- D. Damper tags and equipment nameplates shall be white on black laminated plastic.

## PART 3 – EXECUTION

### 3.01 INSTALLATION

- A. Legends shall be securely fixed to the pipes with full circumference bands on each side of legend. Arrow downstream of legend shall have a full circumference band at the arrow end.
- B. Valve tags shall be numbered in accordance with a valve chart, which shall be framed and mounted where directed by Architect-Engineer. Said chart shall describe valve location and function.
- C. Equipment nameplates shall be labeled the same as shown on the contract documents and shall be securely attached to the equipment.

- D. Damper tags shall be lettered to say: "THIS DAMPER HAS BEEN ADJUSTED TO MEET INDOOR AIR QUALITY STANDARDS. DO NOT TAMPER."

END OF SECTION 15230