SECTION 23 05 53 IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Nameplates.

2. Tags.

3. Stencils.

4. Pipe markers.

5. Ceiling tacks.

6. Labels.

7. Lockout devices.

B. Related Sections:

1. Division 09 - Painting and Coating: Execution requirements for painting specified by this section.

1.02 REFERENCES

A. American Society of Mechanical Engineers:

1. ASME A13.1 - Scheme for the Identification of Piping Systems.

2. Owner’s color code, if any.

1.03 SUBMITTALS

A. Division 01 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit manufacturers catalog literature for each product required.

C. Shop Drawings: Submit list of wording, symbols, letter size, and color coding for mechanical identification and valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.

D. Samples: Submit two tags, labels and pipe markers used on project.

E. Manufacturer's Installation Instructions: Indicate installation instructions, special procedures, and installation.

F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.04 CLOSEOUT SUBMITTALS

A. Division 01 - Execution and Closeout Requirements: Closeout procedures.

B. Project Record Documents: Record actual locations of tagged valves; include valve tag numbers.

1.05 QUALITY ASSURANCE

A. Conform to ASME A13.1 for color scheme for identification of piping systems and accessories, and owner’s color code.

B. Maintain one copy of each document on site.

1.06 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum three years documented experience approved by manufacturer.

1.07 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.08 EXTRA MATERIALS

A. Division 01 - Execution and Closeout Requirements: Spare parts and maintenance products.

PART 2 - PRODUCTS

2.01 NAMEPLATES

A. Manufacturers: Subject to requirements of the specification, provide the following manufacturer’s products by one of the following or approved equal:

1. Craftmark Identification Systems

2. Safety Sign Co.

3. Seton Identification Products

4. Substitutions: Division 01 - Product Requirements

B. Product Description: Laminated three-layer plastic with engraved black letters on light contrasting background color: 2” x 1” x 1/8” thick with 1/4” high characters.

2.02 TAGS

A. Metal Tags:

1. Manufacturers: Subject to requirements of the specification, provide the following manufacturer's products by one of the following or approved equal:

a. Craftmark Identification Systems

b. Brady

c. Seton Identification Products

d. Substitutions: Refer to Division 01 - Product Requirements

2. Brass with stamped letters; tag size minimum 2 inches (38 mm) diameter with finished edges.

B. Information Tags:

1. Manufacturers: Subject to requirements of the specification, provide the following manufacturer's products by one of the following or approved equal:

a. Craftmark Identification Systems

b. Brady

c. Seton Identification Products

d. Substitutions: Refer to Division 01 - Product Requirements

2. Clear plastic with printed "Danger," "Caution," or "Warning" and message; size 3-1/4 x 5-5/8 inches (83 x 143 mm) with grommet and self-locking nylon ties.

C. Tag Chart: Typewritten letter size list of applied tags and location in anodized aluminum frame.

2.03 STENCILS

A. Manufacturers: Subject to requirements of the specification, provide the following manufacturer's products by one of the following or approved equal:

1. Craftmark Identification Systems

2. Brady

3. Seton Identification Products

4. Substitutions: Division 01 - Product Requirements

B. Stencils: With clean cut symbols and letters of following size:

1. Ductwork and Equipment: 2 inches (50 mm) high letters.

C. Stencil Paint: As specified in Division 09, semi-gloss enamel, colors and lettering size conforming to ASME A13.1.

2.04 PIPE MARKERS

A. Color and Lettering: Conform to ASME A13.1 and owner's color code.

B. Plastic Pipe Markers:

1. Manufacturers: Subject to requirements of the specification, provide the following manufacturer's products by one of the following or approved equal:

a. Craftmark Identification Systems

b. Brady

c. Seton Identification Products

d. Substitutions: Refer to Division 01 - Product Requirements

2. Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener.

2.05 LABELS

A. Manufacturers: Subject to requirements of the specification, provide the following manufacturer's products by one of the following or approved equal:

1. Craftmark Identification Systems

2. Brady

3. Seton Identification Products

4. Substitutions: Division 01 - Product Requirements

B. Description: Aluminum size 1.9 x 0.75 inches (48 x 19 mm), adhesive backed with printed identification.

PART 3 - EXECUTION

3.01 PREPARATION

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

B. Prepare surfaces in accordance with Division 09 for stencil painting.

3.02 INSTALLATION

A. Apply stencil painting in accordance with Division 09.

B. Install identifying devices after completion of coverings and painting.

C. Install plastic nameplates with corrosive-resistant mechanical fasteners, or adhesive.

D. Install labels with sufficient adhesive for permanent adhesion and seal with clear lacquer. For unfinished canvas covering, apply paint primer before applying labels.

E. Install tags using corrosion resistant chain. Number tags consecutively by location.

F. Install underground plastic pipe markers 6 to 8 inches (150 to 200 mm) below finished grade, directly above buried pipe.

G. Identify air handling units, split systems, pumps, heat transfer equipment, tanks and water treatment devices with stencil painting. Identify in-line pumps and other small devices with tags.

H. Identify control panels, VFD, starters, fans and major control components outside panels with nameplates.

I. Identify valves in main and branch piping with tags.

J. Identify air terminal units and radiator valves with numbered tags.

K. Tag automatic controls, instruments, and relays. Key to control schematic.

L. Identify piping, concealed or exposed, with plastic pipe markers. Use tags on piping 3/4 inch (20 mm) diameter and smaller. Identify service, flow direction, and pressure. Install in clear view and align with axis of piping. Locate identification not to exceed 20 feet (6 m) 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.

M. Identify ductwork with stenciled painting. Identify with air handling unit identification number and area served. Locate identification at air handling unit, at each side of penetration of structure or enclosure, and at each obstruction.

N. Provide ceiling tacks to locate valves or dampers above T-bar type panel ceilings. Locate in corner of panel closest to equipment.

3.03 SCHEDULES

A. Provide color-coded valve schedule for each system and enclose in Lexan frame.

END OF SECTION