

## SECTION 235700 – STEAM TO HOT WATER CONVERTERS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes shell and tube heat exchangers.

#### 1.3 SUBMITTALS

- A. Product Data: For each type and size of heat exchanger indicated. Include rated capacities, operating characteristics, furnished specialties, and accessories.
- B. Operation and Maintenance Data

#### 1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain same type of heat exchangers through one source from a single manufacturer.
- B. ASME Compliance: Fabricate and label heat-exchanger storage tanks to comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.

#### 1.5 COORDINATION

- A. Coordinate size and location of concrete bases with Architectural and Structural Drawings.

### PART 2 - PRODUCTS

#### 2.1 STEAM TO LIQUID HEAT EXCHANGERS

- A. General

- 1. Manufacturers:
  - a. Taco
  - b. Bell & Gossett
  - c. Patterson-Kelley.

- d. Armstrong
2. Construction: ASME Section VIII;
- a. Shell: Steel
  - b. Heads: Cast Iron Fabricated Steel,
  - c. Tubes:  $\frac{3}{4}$  x 20 BWG
  - d. Tube: Sheet Steel
  - e. Separators: Steel
  - f. Tie Rods: Copper
  - g. Nuts and: Bolts Steel
3. Shell Tappings: Factory fabricated of materials compatible with water heater shell. Attach tappings to shell before testing and labeling. Threaded ends according to ASME B1.20.1.

### PART 3 - EXECUTION

#### 3.1 HEAT-EXCHANGER INSTALLATION

- A. Install heat exchangers level and plumb, according to layout drawings, original design, and referenced standards. Maintain manufacturer's recommended clearances. Arrange units so controls and devices needing service are accessible.
- B. Support heat exchangers on welded steel pipe and angle floor stand.
- C. Install combination temperature and pressure relief valves in water piping for heat exchangers . Extend relief-valve outlet, with drain piping same as water piping in continuous downward pitch, and discharge to nearest floor drain.
- D. Fill heat exchangers with water.

#### 3.2 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to heat exchangers to allow service and maintenance. Arrange piping for easy removal of heat exchangers.

#### 3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including connections. Report results in writing.

END OF SECTION 235700