SECTION 15487 - DOMESTIC HOT WATER STORAGE HEATERS

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 the following for domestic water systems:

1. Indirect-fired, storage water heaters.
2. Accessories.

1.3 SUBMITTALS

A. Product Data: For each type and size of heat exchanger. Include rated capacities; shipping, installed, and operating weights; furnished specialties; and accessories.

B. Product Certificates: Signed by manufacturers of heat exchangers certifying that products furnished comply with requirements.

C. Maintenance Data: For heat exchangers to include in maintenance manuals specified in Division 1.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain same type of heat exchangers through one source from a single manufacturer.

B. Product Options: Drawings indicate size, profiles, and dimensional requirements of heat exchangers and are based on specific units indicated. Other manufacturers' products complying with requirements may be considered. Refer to Division 1 Section "Substitutions."

C. ASHRAE Standard: Comply with performance efficiencies prescribed in ASHRAE 90.1, "Energy Efficient Design of New Buildings except Low-Rise Residential Buildings."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Indirect-fired, Storage Water Heaters:

a. Amtrol, Inc.
b. GlowCore Corp.
c. Smith: A. O. Smith Water Products Co.

d. SuperStor

2.2 INDIRECT-FIRED STORAGE WATER HEATERS

.

A. Storage-Tank-Shell Construction: Non-ASME-code stainless steel with 150-psig working-pressure rating.

1. Tappings: Factory fabricated of materials compatible with tank for piping connections, relief valve, pressure gage, thermometer, blowdown, vent, and controls as required. Attach tappings to tank before testing and labeling. Include ASME B1.20.1, pipe thread.
2. Interior Finish: 316L Stainless steel
3. Insulation: 2” Polyurethane Foam, comply with ASHRAE 90.1.
4. Outer Jacket: Polyethylene.

B. Heat Exchanger System:

a. Double wall tubing vented to atmosphere.
b. Copper coil assembly for heating fluid. Include working-pressure rating equal to or greater than heating-fluid supply pressure.

PART 3 - EXECUTION

3.1 CONCRETE BASES

A. Coordinate with Division 3 for installation of concrete bases of dimensions indicated.

3.2 INDIRECT FIRED STORAGE HEATER INSTALLATION

A. Install storage heaters on concrete bases, 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. Anchor storage heater to substrate.

C. Install temperature and pressure relief valves in top portion of storage tank shells. Use relief valves with sensing elements that extend into shells. Extend relief valve outlet with water piping in continuous downward pitch and discharge onto closest floor drain.

D. Install vacuum relief valves in cold-water-inlet piping.

E. Install storage heater piping as indirect waste to spill into open drains or over floor drains. Install hose-end drain valves at low points in water piping for water heaters that do not have tank drains. Refer to Division 15 Section "Plumbing Specialties" for drain valves.

F. Install thermometers on storage heater inlet and outlet piping. Refer to Division 15 Section "Meters and Gages" for thermometers.

G. Install pressure gages on storage heater piping. Refer to Division 15 Section "Meters and Gages" for pressure gages.

H. Fill storage heater with water.

3.3 CONNECTIONS

A. Piping installation requirements are specified in other Division 15 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to heat exchangers to allow service and maintenance.

C. Connect hot- and cold-water piping with shutoff valves and unions. Connect hot-water-circulating piping with shutoff valve, check valve, and union.

D. Make connections with dielectric fittings where piping is made of dissimilar metal.

END OF SECTION 15487