PART 1  GENERAL

1.01 SUBMITTALS

A. Action Submittals:
   
   1. Manufacturer’s product data.

T 2 PRODUCTS

2.01 ELECTRIC WATER HEATERS

A. General: The heater is designed specifically for installation in a hazardous location. All operating controls are to be housed within an electrical control panel rated for operation in a Class 1, Division 1&2, Groups B,C,D; Class 2, Division 1&2, Groups E,F,G; Class 3, Division 1&2; Nema 4, 7BCD,9; hazardous area and is UL and CSA listed and approved. Nit shall be of explosion-proof construction and suitable for operation in a Class I, Division 2 process area.

B. Description:
   
   a. Provide a quantity of _____ commercial explosion proof electric water heater(s) Model No. _________________________ as manufactured by HUBBELL Electric Heater Co., Stratford, CT.
   b. Regulatory Compliance: UL and CSA listed, ASME, and ASHRAE 90.1.
   c. The entire unit is to be complete with all operating controls and require only plumbing and electrical service connections.
   d. The tank shall be all welded steel commercial construction designed for 150psi working pressure and contain _____ gallons of storage.
   e. The pressure vessel is to be lined with seamless Hydrastone Cement to a minimum thickness of 1/2" on 100% of all interior tank surfaces (Optional Specification: tank to be fabricated from solid copper-silicon, stainless steel) and does not require any type of anodic protection.
   f. The tank shall be designed and fabricated with non-ferrous copper-silicon threaded tappings and non-ferrous inlet and outlet piping for maximum corrosion resistance. Steel tank tappings will not be acceptable.
g. Insulation: The entire tank is to be insulated with a minimum of 2" thick polyurethane foam insulation and exceed the latest ASHRAE standard for stand-by heat loss.

h. The complete heater shall be supplied with a high impact colorized composite protective jacket which cannot rust or corrode and does not require painting.

i. The cold water inlet shall be 3/4" Female NPT (Optional Specification: 1 1/2" Male NPT) and include a non-corrosive strata-flow diffuser which prevents incoming cold water from mixing too rapidly with hot water in the tank.

j. 3/4" hose connection drain.

k. The hot water outlet shall be 3/4" Male NPT (Optional Specification: 1 1/2" Male NPT) and shall include a factory installed built-in heat trap to prevent water from radiating through the piping during stand-by periods.

l. A separate 3/4" Female NPT tapping is to be provided for relief valve installation. An ASME rated automatic reseating combination temperature and pressure safety relief valve set at 150psi and 210°F shall be factory supplied.

m. Heating Element: The heating element(s) shall be a high quality Incoloy sheath electric immersion type, and shall be rated at _____ KW which will heat _____ GPH of water at _____°F Rise (_____° to _____°F).

n. The heater shall be designed to operate at _____ volts_____ phase_____ Hz (balanced) with all necessary operating controls factory mounted, wired and tested. Each circuit is to be independently operated through a definite purpose magnetic contactor having a resistive load rating exceeding the ampere rating of that particular circuit. Water temperature shall be controlled through an adjustable 110-170°F snap action surface thermostat (Optional Specification: an immersion thermostat 100-180°F or 30-110°F). An over-temperature manual reset Hi-Limit shall be factory installed to disconnect all conductors to the heating element in the event of an over-temperature condition in the pressure vessel.

o. In addition, the water heater shall be supplied with the following optional features:

---

C. Manufacturers:

1. HUBBELL Electric Heater Co; Model ER.
2. Or equal.
PART 3 EXECUTION

3.01 INSTALLATION

A. Install, arrange, and connect equipment as shown on Drawings and in accordance with manufacturer’s recommendations.

END OF SECTION