SECTION 22 11 23
DOMESTIC WATER PUMPS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Hot water circulating pump, hot water recirculation pump.

1.2 RELATED WORK

A. Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING.

B. Section 22 05 12, GENERAL MOTOR REQUIREMENTS FOR PLUMBING EQUIPMENT.

C. SECTION 22 08 00 – COMMISSIONING OF PLUMBING SYSTEMS.

Requirements for commissioning, systems readiness checklist, and training.

D. Section 26 29 11, LOW-VOLTAGE MOTOR STARTERS.

1.3 QUALITY ASSURANCE

A. Domestic Hot Water Recirculating Pump:

1. Components shall be furnished by a single manufacturer and the system shall be the standard cataloged product of the manufacturer.

1.4 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Manufacturer's Literature and Data:

1. Pump:

a. Taco Model No. 007-SF5, or approved equal.

b. 3250 RPM.

c. 0-23 GPM.

d. 5 GPM @ 9FT/HD and 10 GPM @ 7.5 FT/HD Performance Curves.

e. 1 GPM @ 9.5 FT/HD Design Curve

C. Certified copies of all the factory and construction site test data sheets and reports.

D. Complete operating and maintenance manuals including wiring diagrams, technical data sheets and information for ordering replaceable parts:

1. Include complete list indicating all components of the systems.

2. Include complete diagrams of the internal wiring for each item of equipment.

3. Diagrams shall have their terminals identified to facilitate installation, operation and maintenance.

E. Completed System Readiness Checklist provided by the Commissioning Agent and completed by the contractor, signed by a qualified technician and dated on the date of completion, in accordance with the requirements of Section 22 08 00 COMMISSIONING OF PLUMBING SYSTEMS.

1.5 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. National Electrical Manufacturers Association (NEMA):

ICS6-93 (R2006).....Industrial Control and Systems Enclosures

250-08.....Enclosures for Electrical Equipment (1000 Volts Maximum)

C. American Society of Mechanical Engineers (ASME):

Boiler and Pressure Vessel Code: 2010

Section VIII.....Pressure Vessels, Division I and II

D. Underwriters' Laboratories, Inc. (UL):

508-99 (R2008)..... Standards for Industrial Control Equipment

PART 2 - PRODUCTS

2.1 INLINE HOT WATER RECIRCULATING PUMP

A. Centrifugal in-line horizontal oil lubricated pump designed for quiet operation and 862 kPa (125 psi).

B. Stainless Steel body construction capable of pumping 1 GPM) @ 9.5 Feet of head when drive by 1/25 HP single phase, 120VAC motor. Pump shall be non-overloading at any point on the pump curve.

C. The pump shall be provided with "on-off" switch for shut down. In the inlet and outlet piping of the pump shutoff valves shall be installed to permit service to the pump without draining the system.

PART 3 - EXECUTION

3.1 STARTUP AND TESTING

A. Make tests as recommended by product manufacturer and listed standards and under actual or simulated operating conditions and prove full compliance with design and specified requirements. Tests of the various items of equipment shall be performed simultaneously with the system of which each item is an integral part.

B. System Test: After installation is completed provide an operational test of the completed system including flow rates, pressure compliance, alarms and all control functions.

C. When any defects are detected, correct defects and repeat test.

D. The Commissioning Agent will observe startup and contractor testing of selected equipment. Coordinate the startup and contractor testing schedules with the Resident Engineer and Commissioning Agent. Provide a minimum of 7 days prior to notice.

3.2 COMMISSIONING

A. Provide Commissioning Documentation accordance with the requirements of Section 22 08 00 – COMMISSIONING OF PLUMBING SYSTEMS for all inspection, startup, and contractor testing required above and required by the System Readiness Checklist provided by the Commissioning Agent.

B. Components provided under this Section of the specification will be tested as part of a larger system. Refer to Section 22 08 00 – COMMISSIONING OF PLUMBING SYSTEMS and related sections for contractor responsibilities for system commissioning.

3.3 DEMONSTRATION AND TRAINING

A. Provide services of manufacturer’s technical representative for four hours to instruct VA Personnel in operation and maintenance of units.

B. Submit training plans and instructor qualifications in accordance with the requirements of Section 22 08 00 COMMISSIONING OF PLUMBING SYSTEMS.

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