

SECTION 463300 - LIQUID CHEMICAL FEED SYSTEM

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Chemical Injection Pumps
 - 2. Chemical Solution Tank

1.02 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 013300.
- B. Submit complete fabrication, assembly foundation, and installation drawings for all pumps, motors and accessories to illustrate construction and assembly of components.
- C. Manufacturer's installation instructions and check out instructions.

1.03 CLOSEOUT SUBMITTALS

- A. Maintenance data: Include manufacturer's literature, cleaning procedures, replacement parts lists, and wiring diagrams, for pumps and motors.

1.04 DELIVERY STORAGE AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of Section 01600.
- B. Accept chemical metering pumps and accessories on site in factory packing. Inspect for damage upon delivery to site.
- C. Store and safeguard equipment, materials, instructions, and spare parts in accordance with manufacturer's written instructions.

1.05 QUALITY ASSURANCE

- A. Chemical metering pumps and accessories shall be supplied by a single manufacturer.

1.06 WARRANTY

- A. The chemical metering pump manufacturer shall provide a five-year warranty from equipment start-up. All other components shall carry a two-year warranty.

1.07 BUY AMERICAN REQUIREMENTS

- A. Provide certificates to show that all products meet the following requirements.
 - 1. American Iron and Steel (AIS)
 - 2. Build America, Buy America Act
- B. See Supplementary Conditions for details.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. NSF Compliance: Fabricate and label equipment components that will be in contact with potable water to comply with NSF 61 and NSF 372.
- B. Chemical injection pump shall comply with NSF 50.
- C. Design Characteristics:
 - 1. Chemical: Calcium Hypochlorite
 - 2. Solution: 0.16%
 - 3. Min/Max Required Output: 0.004 – 4.00 gph
 - 4. Rated Injection Pressure: 100psi
 - 5. Pump Signals:
 - a. Pump Run Status Contact
 - b. Pump Start/Stop Command Input
 - c. Pump Speed Control Input: 4-20mA

2.02 CHEMICAL SOLUTION INJECTION PUMP (CP-01)

- A. Solenoid-driven chemical feed pump intended for liquid injection of calcium hypochlorite and enclosed in a chemically resistant housing.
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - 1. LMI
 - 2. Stenner
 - 3. Pulsafeed
 - 4. Or Equal

2.03 CHEMICAL SOLUTION TANK (CT-01)

- A. Tank shall be cylindrical process chemical tank with lid.

- B. Tank shall be doubled walled for secondary containment.
- C. Tank shall be intended for liquid containment of calcium hypochlorite.
- D. Size: 15 gallons
- E. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
 - 1. Peabody Engineering ProChem
 - 2. LMI
 - 3. Pulsafeed
 - 4. Or Equal

PART 3 EXECUTION

3.01 INSTALLATION

- A. Follow manufacturer's recommendation for installation. Installation will conform to the guidelines provided by the Installation & Operation Manual.

3.02 INSPECTION

- A. Verify that structures, piping, and equipment are compatible.

3.03 ADJUST

- A. Start-up: Start-up equipment system and make adjustments required to place system in proper operating condition.
- B. Calcium hypochlorite solution will be provided by the operator of the City and Borough of Yakutat Water System. Coordinate with operator for initial mixing and filling of the solution tank prior to testing the chlorination system equipment.

END OF SECTION

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