

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Combination gauging, overflow and leak detection system for sodium hypochlorite storage tank.

1.02 SUBMITTALS

- A. Shop drawings and product data for configuration of alarm system and each component, with physical dimensions and proposed mounting locations of components and conduit runs.
- B. Elementary wiring diagrams and manufacturer's literature for alarm panels, cables, probes and fittings.
- C. Written proposal for any modifications must be approved by the Engineer in writing prior to installation.
- D. Operation & maintenance manuals.

1.03 SPARE PARTS

- A. One (1) spare probe of each type.
- B. One (1) case of spare printer paper rolls.

PART 2 - PRODUCTS

2.01 LEVEL MONITORING, OVERFILL AND LEAK DETECTION SYSTEM

- A. The system shall be a packaged gauging, overflow and leak detection alarm system. All system components shall be of one manufacturer. The system shall be an audio / visual alarm controller with digital display as manufactured by OMNTEC, Proteus-X OEL8000IIX with leak detection capabilities.
- B. The control and annunciator enclosure shall be steel NEMA 4X stainless steel enclosure. Enclosure shall be furnished with internal steel component mounting back panel. Finish high gloss enamel, color medium gray.
- C. The enclosure shall house the controlling electronic circuitry, panel mounted audio alarm with time out and auto reset lights for visual condition status and push-button switches for audio alarm silencing and system test.
 - 1. System functions and alarm conditions shall be displayed by a 4-line by 40 character backlit LCD display and a 36-character thermal printer.
 - 2. Alarm panel shall continuously monitor all sensor circuits. Power input to module shall be 120 volt, A.C., single phase, 60 cycle.
 - 3. TCP/IP standard communication.
- D. The remote audio / visual alarm and level indicator shall be a NEMA 4X stainless steel enclosure with panel mounted alarm light with intermittent buzzer which notifies fill operator of warning level and red alarm light with steady buzzer which notifies the fill operator of full level. Warning and full levels shall be at 90% and 95% of the tank capacity, respectively. Remote indicator shall also provide LED display of tank level at all times. The indicator shall be as manufactured OMNTEC, Model RD625-2-HLO, or approved equal.

2.02 SODIUM HYPOCHLORITE LEVEL GAUGING / OVERFILL ALARM PROBE

- A. Level gauging / overfill alarm probe shall be as manufactured by OMNTEC Series MTG Magnetostrictive, Type F flexible Kynar probe with FLT-H 2-inch hastelloy float kit, or approved equal.
- B. The level gauging / overfill alarm probe shall be capable of continuously monitoring the liquid level in the tank. The continuous level shall be transmitted to the control panel and recorded. Set points shall be programmable which will provide for a "WARNING" and "FULL" level condition. The probe shall be located as indicated on the contract drawings, and installed via a 4-inch NPT connection installed at the top of the tank.
- C. Probe shall also sense product temperature with report back to the control panel.
- D. Probe length shall be compatible with tank height and/or diameter.
- E. Probe shall include a cap sized for the tank port with integral cable gland, floats and installation kit.
- F. Contractor shall provide and install all fittings and manufacturer installation kits necessary to install probe.

2.03 SODIUM HYDROXIDE LEVEL GAUGING / OVERFILL ALARM PROBE

- A. Level gauging / overfill alarm probe shall be as manufactured by OMNTEC Series MTG Magnetostrictive, Type F flexible Kynar probe with FLT-H 2-inch hastelloy float kit, or approved equal.
- B. The level gauging / overfill alarm probe shall be capable of continuously monitoring the liquid level in the tank. The continuous level shall be transmitted to the control panel and recorded. Set points shall be programmable which will provide for a "WARNING" and "FULL" level condition. The probe shall be located as indicated on the contract drawings, and installed via a 4-inch NPT connection installed at the top of the tank.
- C. Probe shall also sense product temperature with report back to the control panel.
- D. Probe length shall be compatible with tank height and/or diameter.
- E. Probe shall include a cap sized for the tank port with integral cable gland, floats and installation kit.
- F. Contractor shall provide and install all fittings and manufacturer installation kits necessary to install probe.

2.04 LEAK DETECTION ALARM PROBE AND HIGH LEVEL SENSOR

- A. The leak detection probe shall be capable of sensing the presence of leaking product. It shall be capable of transmitting an electric signal to the control panel during a leakage situation. The leak detection probe shall be located in the sodium hypochlorite tank secondary containment dike as shown on contract drawings.
- B. The probes shall be able to automatically reset when no longer sensing the presence of product. The probes shall be compatible with the material being stored (15% sodium hypochlorite solution).
- C. The probes shall be as manufactured by OMNTEC, BX-LS-PVC or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. All parts and components of the alarm system must be clean and free of dirt and water prior to installation.
- B. Panels must be accessible to the Owner for periodic testing of the system and reading of the indication lights during an alarm situation.
- C. All power and sensor wiring for all components of the alarm system shall be installed in accordance with manufacturer's installation instructions and Division 26 of the specifications. Provide all control and power wiring in rigid conduit.
- D. Installation shall be neat and workmanlike and to the complete satisfaction of the Engineer.
- E. Install all system components in accordance with the manufacturer's installation instructions. Provide all equipment, connections and incidentals as required for a complete system installation.
- F. Demonstrate operation of system components to Owner.
- G. Provide type and quantities of wiring as per manufacturers recommendations.
- H. Installation shall comply with Nassau County Health Department and New York State Department of Environmental Conservation Chemical Bulk Storage Requirements.

END OF SECTION 409123.36