

SECTION 15402FREEZE PROTECTION OF PIPINGPART 1 - GENERAL1.1 DESCRIPTION

- A. Provide self-regulating electric heating cable on all exterior chemical feed, sample and carrier water piping, including valves and appurtenances, exposed to freezing temperatures as noted on the drawings.

1.2 QUALITY ASSURANCE

- A. Acceptable Manufacturers:
 - 1. TYCO Thermal Control
 - a) Raychem WinterGard Plus H611
 - 2. Or approved equal.

1.3 JOB CONDITIONS

- A. Scheduling of Work: Schedule all work so as not to delay work of other trades.

1.4 SUBMITTALS TO THE ENGINEER

- A. Shop Drawings shall be submitted for approval as required by the General Conditions of the Construction Contract.

PART 2 - PRODUCTS2.1 MATERIALS

- A. Heating cables shall consist of parallel conductors with self-regulating conductive core, modified polyolefin inner insulation, fluoropolymer exterior jacket.
- B. Cable shall have a thermal rating of not less than 6 watts per foot, 120 Volts.
- C. Cables shall be equivalent to WinterGard Plus H611
- D. For sodium hypochlorite feed lines at chlorine contact tank (3/4" HYP in 2" Pipe Conduit) provide 120V junction box, outdoor rated with built-in ground fault protection fault protection equivalent to WinterGard accessory H921.
- E. For Sodium hypochlorite feed lines at chlorine contact tank provide power connection kit (H900), 2 end seals and one splice kit (H910).
- F. For sample water lines at chlorine contact tank provide 4-120V junction boxes, outdoor rated with built-in ground fault protection (H921).
- G. For sample water lines at chlorine contact tank provide 4 power connection kits (H900), 4 end seals.
- H. For all lines noted above at Hypochlorite Building provide separate end seals for each, 6 splices and power connection kits.
- I. Straight-trace cables on bottom of pipe using glass tape at 1-foot intervals to secure in place. Apply before insulation is installed.
- J. Serial cable around body and stem of all valves, hose bibbs and gauges.

- K. Provide "Electric Traced" labels on the outside of the PVC jacketing.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in strict accordance with manufacturer's printed instructions.
- B. Installation shall be by mechanics regularly employed in that field.
- C. Field service technicians shall inspect and instruct contractor on installation.

3.2 COMPLETION

- A. Upon completion of the project, the manufacturer shall:
 - 1. Furnish three (3) instruction manuals covering the function and operation of the system.

3.3 GUARANTEE

- A. The system herein specified, shall be guaranteed to be free from original defects in both material and workmanship for a period of one (1) year of normal use and service. The heat trace product shall have a 10-year warranty against original defects in both material and workmanship. This guarantee shall become effective starting the date the Owner begins to receive beneficial use of the system.

END OF SECTION