

SECTION 23 2500 - PIPE CLEANING, FLUSHING AND CHEMICAL TREATMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Cleaning of piping systems

1.2 REGULATORY REQUIREMENTS

- A. Conform to applicable EPA code for addition of non-potable chemicals to building mechanical systems and for discharge to public sewage systems.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All materials proposed must be compatible with existing treatment systems and chemicals.
- B. System Cleaner:
 - 1. Liquid alkaline compound with emulsifying agents and detergents to remove grease and petroleum products.

2.2 EQUIPMENT

- A. Water Meter: Displacement type cold water meter with sealed, tamper proof magnetic drive, impulse contact register, single pole, double throw dry contact switch.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Systems shall be operational, filled, started and vented prior to cleaning. Use water meter to record capacity in each system.
- B. Place terminal control valves in OPEN position during cleaning.

3.2 CLEANING SEQUENCE

- A. Add cleaner to closed systems at concentration as recommended by manufacturer.

- B. Hot Water Heating Systems: Apply heat while circulating, slowly raising temperature to 160°F and maintain for 12 hours minimum. Remove heat and circulate to 100°F or less; drain systems as quickly as possible and refill with clean water. Circulate for 6 hours at design temperatures, then drain. Refill with clean water and repeat until system cleaner is removed.
- C. Chilled Water Systems: Circulate for 48 hours, then drain systems as quickly as possible. Refill with clean water, circulate for 24 hours, then drain. Refill with clean water and repeat until system cleaner is removed.
- D. Steam Systems: Apply heat, slowly raising boiler temperature to 160°F and maintain for 12 hours minimum. Cool, then drain as quickly as possible. Refill with clean water, drain, refill and check for sludge. Repeat until system is free of sludge. Apply heat to produce steam for piping system and maintain for 8 hours minimum. Bypass traps and waste condensate.
- E. Use neutralizer agents on recommendation of system cleaner supplier and approval of Owner.
- F. Flush open systems with clean water for one hour minimum. Drain completely and refill.
- G. Remove, clean and replace strainer screens.
- H. Inspect, remove sludge and flush low points with clean water after cleaning process is completed. Include disassembly of components as required.

END OF SECTION 23 2500