

## **SECTION 220800**

### **CLEANING AND TESTING**

#### **PART 1 GENERAL**

##### **1.01 SUBMITTALS**

- A. Quality Control Submittals
  - 1. Test Reports (Field Tests): Submit data for each system tested, and/or disinfected; include date performed, description, and test results for each system.

##### **1.02 QUALITY ASSURANCE**

- A. Regulatory Requirements:
  - 1. Perform factory testing of factory fabricated equipment in complete accordance with the agencies having jurisdiction.
  - 2. Perform field testing of piping systems in complete accordance with the local utilities and other agencies having jurisdiction and as specified.

##### **1.03 PROJECT CONDITIONS**

- A. Protection: During test Work, protect controls, gages and accessories which are not designed to withstand test pressures. Do not utilize permanently installed gages for field testing of systems.

##### **1.04 SEQUENCING AND SCHEDULING**

- A. Transmit written notification of proposed date and time of operational tests to the Director's Representative at least 5 days in advance of such tests.
- B. Perform cleaning and testing Work in the presence of the Director's Representative.
- C. Pressure test piping systems inside buildings, at the roughing-in stage of installation, before piping is enclosed by construction Work, and at other times as directed. Perform test operations in sections as required and directed, to progress the Work in a satisfactory manner and not delay the general construction of the building. Valve or cap-off sections of piping to be tested, utilizing valves required to be installed in the permanent piping systems, or temporary valves or caps as required to perform the Work.

#### **PART 2 PRODUCTS**

##### **2.01 MATERIALS**

- A. Test Equipment and Instruments: Type and kind as required for the particular system under test.

- B. Test Media (air, vacuum, water): As specified for the particular piping or system under test.
- C. Cleaning Agent (water): As specified for the particular piping, apparatus or system being cleaned.

## **PART 3 EXECUTION**

### **3.01 PRELIMINARY WORK**

- A. Thoroughly clean pipe and tubing prior to installation. During installation, prevent foreign matter from entering systems. Prevent if possible and remove stoppages or obstructions from piping and systems.

### **3.02 PRESSURE TESTS - PIPING**

- A. Piping shall be tight under test and shall not show loss in pressure or visible leaks, during test operations or after the minimum duration of time as specified. Remove piping which is not tight under test; remake joints and repeat test until no leaks occur.
- B. Drainage, Vent, Conductor and Roof Drain Piping (Inside Buildings): Perform tests before fixtures are installed. Test by filling the entire system with water, and allowing to stand for 3 hours, with no noticeable loss of water. Test joints under a minimum head of 10 feet of water, except the uppermost section. Test the uppermost section to overflowing.

**END OF SECTION**