

**SECTION 02250  
HYDROSTATIC TESTING PROCEDURE**

**A. Water Test for Ductile Iron Pipe**

All new water pipeline construction shall be hydrostatically tested in accordance with Hydrostatic Testing, AWWA C600.

The test pressure shall not be less than 150 psi at the highest point. Along the test section, the test pressure shall not exceed pipe or thrust-restraint design pressure, shall be of at least 2 hour duration, and shall not vary by more than 5 psi for the duration of the test.

Before testing, all air shall be expelled and all caps, plugs and fittings shall be properly braced. Air is expelled by opening a fire hydrant or air release vents or corporation cocks at the high points of the line. Once all the air is released, the valves between the existing distribution system and the pipe to be tested are closed. Pressure is then applied to the portion of the pipeline being tested by means of a hand or motor driven pump.

The pipeline shall be pressurized to 150 psi and held at this test pressure for at least two (2) hours duration, with the leakage and pressure recordings being conducted simultaneously. Any make-up water shall be carefully measured by a meter or by pumping the water from a vessel of known volume. After every five (5) psi drop (in the event the psi drop should occur) the pressure shall be returned to 150 psi and leakage recorded.

**B. Leakage**

Allowable make up water formula:  $\frac{SD\sqrt{P}}{133,200}L$ , where L = allowable leakage in gallons per hour; S = length of pipe tested, in feet; D = nominal diameter of the pipe, in inches; and P = average test pressure during the leakage test, in pounds per square inch gauge. (revised allowable make up water formula divisor is 148,000)

Allowable Leakage Table per 1000 feet of pipeline in gph at a test pressure of 150 psi.

TABLE 3

Pipe Size-in.	4	6	8	10	12	16	20	24	30	36	42
Leakage-gph	0.33	0.50	0.66	0.83	0.99	1.32	1.66	1.99	2.48	2.98	3.48

**C. Documentation**

Each Hydrostatic Test shall be documented using the following format:

HYDROSTATIC WATER PIPELINE TEST REPORT

Date \_\_\_\_\_ Tester \_\_\_\_\_

Project Name \_\_\_\_\_

Location \_\_\_\_\_

Pipe Diameter \_\_\_\_\_ Pipe Length \_\_\_\_\_ Pipe Material \_\_\_\_\_

Meter Number & Size \_\_\_\_\_ Meter Reading \_\_\_\_\_

Allowable Leakage (for two hour test period) \_\_\_\_\_

Test Start Time \_\_\_\_\_ Test Ending Time \_\_\_\_\_

Test Pressure Used \_\_\_\_\_ Leakage Recorded \_\_\_\_\_

Test Analysis (U-unsatisfactory S-satisfactory) \_\_\_\_\_

Sketch of pipe layout being tested (include fittings, caps, and plugs, etc. in the sketch) to be noted below or to be attached.

END OF SECTION