

SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS

SPECIFICATIONS FOR RECLAIMED WATER METER TYPE June 2005

1. SCOPE

This specification covers reclaimed water meters one and one-half inches (1-1/2") and larger in size designed for waterworks service.

2. GENERAL REQUIREMENTS

- a. Except as otherwise modified or supplemented herein, the latest revision of AWWA Standard C700, C701, C702, C708, and C712, the reclaimed water meters shall be magnetic drive and comply with all requirements of the water meters in this specification including sizing and accuracy with the exception of being properly marked for non-potable water applications.
- b. The San Antonio Water System reserves the right to limit purchase of meters one and one half inches (1-1/2") or larger in size from manufacturers whose meter conforms to the provisions contained herein.

3. SPECIFIC REQUIREMENTS

a. Meter Case

The main case shall be solid with removable top or bottom design and will be manufactured of bronze. In either case, the top or bottom shall be bolted to the housing. The register box and register cover shall be bronze. The meter shall be so constructed that the main case will withstand internal pressure and external stress to eliminate distortion, cracking and breaking, which will cause leakage, damage to other components, or interfere with the proper operation of the meter in general.

b. Serial Number

The serial number of the meter shall be clearly imprinted on the outer case as well as on the register box cover.

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c. **Meter Registers**

The meter register shall be a "Sealed Register" type with straight reading indicator with a minimum of six numbered wheels (dials) and shall indicate in cubic feet. All digits shall be black on white background except the right two digits. The right digits shall be white numerals on black background (dials or fixed digits). There shall be a test index circle, which shall be divided into 100 equal parts, each tenth numbered. The index circle shall be located on the outer periphery of the face, equipped with a center sweep test hand. The month the register is manufactured, by year, and size or model shall be stamped or printed clearly on the register face with Arabic numerals. The register shall also have a "low flow" indicator. Registers for given manufacturer, size and like model shall be interchangeable.

As used in these specifications, the term "Sealed Register" shall mean a register that is tamper proof, factory sealed, non-shop repairable, hermetically sealed against fogging, moisture and corrosion and mechanically disconnected from the measuring components. If the sealed register becomes defective or vandalized, the register will be returned to the manufacturer for repairs or replacement. The manufacturer will hermetically seal all registers repaired or replaced.

The lens shall be of a high strength heat tested glass or impact-resistant glass designed to minimize breakage.

The register shall be secured to the meter case with a temper-resistant locking device.

d. **Reclaimed Water Meter Requirements**

The reclaimed water meters shall be appropriately marked for reclaimed water application. The reclaimed water meters shall have a lavender colored lid, shroud and register dial face with the word "RECLAIMED" engraved or cast on the meter housing and chamber and clearly printed on the register dial face and lid. The non-potable water symbol shall be on the register lid.

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e. **Strainers**

If required each meter shall be provided with an internal stainless steel strainer or strainer of a suitable non-corrosive material. It shall fit snugly in the casing and shall be rigid and easy to remove.

5. ACCURACY

The manufacturer shall guarantee that all new meters will conform to AWWA Manual M6 for accuracy at low, intermediate and high flow rates on a meter size for size basis.

6. TESTS

- a. The San Antonio Water System reserved the option to test all meters in accordance with AWWA Manual M6. Meters that fail this test will be returned to the manufacturer, freight collect and the manufacturer will replace the defective meter(s) with new meter(s), freight prepaid within thirty (30) days from receipt of the defective meter(s).
- b. A tag indicating the factory accuracy test results of the meter on low, intermediate and high flows shall accompany all meters.

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7. GUARANTEES

- a. The manufacturer shall unconditionally guarantee the one and one half inch (1-1/2") and larger meter as follows:

That the "Sealed Register" unit will operate accurately for a period of fifteen (15) years from date of receipt.

That the new reclaimed water meters will perform to new meter accuracy standards under the provisions of AWWA Manual M6, latest revision, for a period of at least one (1) year from date of receipt.

Reclaimed water meter shall be free from defects in materials and workmanship for a period of one (1) year from date of receipt. **Meter shall not be affected by sand or small debris in line.**

That after one (1) year in service the new meters will meet repaired meter accuracy standards, AWWA Manual M6.

- b. Damage caused by vandalism, acts of God or willful or negligent means will be borne by the San Antonio Water System.
- c. Certified results will be furnished with all returned meters.

8. QUALITY SYSTEM

Manufacturers shall have an I.S.O. 9001: 2000 registered quality systems. If on receipt of meters they are found to be non-compliant the manufacturer shall replace the defective meters according to meter size with a meter that meets the San Antonio Water System's specifications. The defective meters will be returned to the manufacturer, freight collect, and the manufacturer shall replace the meter, freight prepaid within thirty (30) days from receipt of the defective meter.