Sample Specification

Water Meters: Lead Free 1-1/2”-2” Nylon Coated Ductile Iron Positive Displacement Meters

Scope:

This Specification covers Nylon coated, ductile iron body cold-water positive displacement meters compatible with open architecture radio read equipment, in sizes 1-1/2”" though 2", and the materials employed in their fabrication. The utility recognizes the importance of incorporating lead free products where possible and makes every effort to protect the health of their customers.

AWWA Standards:

- All Meters shall meet or exceed the latest version of the American Water Works Association Standard C700 for Cold Water Meters - Displacement Type for accuracy, testing, and disc nutations.
- All Meters shall meet or exceed the American Water Works Association Standard C707-R92 for Encoder-Type Remote-Registration systems for Cold Water Meters when equipped with an open architecture radio MIU.

Main Case:

- Main cases shall be composed of lead free nylon coated ductile iron
- All materials used in the construction of the main cases shall have sufficient dimensional stability to retain operating clearances at working temperature up to 105 degrees F.
- The manufacturer shall warranty the main case for a period of 25 years from the date of shipment.
- The meter serial shall be affixed to the flange of the main case of the meter.

Top Plate:

- Top plates shall be made of lead free nylon coated ductile iron with a composite insert.

Measuring Chamber:

- Measuring chambers shall be made of a suitable engineered plastic as described in AWWA C-700.
- Chamber shall be of the Nutating Disc style.
- The chamber magnet shall be driven by a stainless steel drive shaft.
- The chamber magnet shall incorporate a protective plastic shroud around the magnet.
- The measuring chamber shall incorporate a locating device that aligns to the main case of the meter to ensure proper chamber orientation and alignment.
- The measuring chamber shall be locked into place with a chamber retainer.
- The chamber shall be a large capacity chamber to reduce wear and must not exceed the following Nutations per gallon.

Size	1-1/2 "	2"
Nutations Per Gallon	6.47	3.92

Headloss:

- Meters shall not exceed seven-PSI pressure loss at AWWA safe maximum operating capacity.

Accuracy:

- Meters shall be 100% factory tested for accuracy and have the factory test results provided with each meter.
- Meters shall be pressure tested to ensure against leakage.
- Meters shall comply with the AWWA C700 accuracy requirements as specified in section 3.8 of the standard for a period of five years from the date of installation.
- Additionally, the manufacturer shall warranty the meter to meet or exceed AWWA repaired meter accuracy standards per the following:

Size of Meter	Years of Warranty or	Millions of Gallons Registered
1-1/2"	15	5,500,000
2"	15	8,500,000

Strainers:

- All meters shall be provided with strainer screens installed in the meter.
- Strainers shall be rigid, fit snugly, be easy to remove, and have an effective straining area at least twice that of the inlet opening.

Register Assembly:

- Registers shall be magnetic driven, straight reading, and permanently sealed by the manufacturer.
- The register shall provide for visual registration at the meter.
- The numerals on the number wheels of the register shall not be less then 1/4" in height and should be legible at a 45-degree angle.
- Registers shall incorporate a center sweep test hand and a low flow indicator.
- The register shall be secured to the meter main case by a tamper resistant bayonet-style locking mechanism protecting against unauthorized removal of the register.
- No special tools shall be required to remove the register.