

ROYCE MODEL 711

PORTABLE SUSPENDED SOLIDS/INTERFACE SYSTEM

(Revised 8/5/2004)

The system shall be Royce Technologies Model 711 Portable System with Model 71 Sensor or approved equal. It shall consist of at least two major parts for analyzing Suspended Solids and Blanket Interfaces on a portable basis.

1. The Analyzer w/ Hand/Belt Strap
2. The Sensor w/ quick disconnect

THE MONITOR

The analyzer shall be housed in a glass-filled nylon enclosure with a Velcro hand strap which can be converted to a belt mounting strap. The analyzer shall be sealed in such a way that it will float when accidentally dropped in liquid and it will not accept liquid intrusion through its seals if submerged to a depth of up to 33 feet. It shall have a digital display controlled by microprocessor circuitry.

The analyzer shall give a positive numerically displayed value in both the Suspended Solids and Interface Level modes. It shall NOT require operator interpretation of sounds or lights. It will give this indication over the entire range of the analyzer without interpretation of step changes.

The analyzer shall NOT require any or manual inputs of any kind to determine the Suspended Solids or the Interface except to calibrate the system. The Monitor shall have Dual functions for Suspended Solids and Interface level WITHOUT having to recalibrate in any way. Function selection ONLY will be permitted. All program memory and features of the instrument will not require any type of battery backup.

The analyzer shall have the following general electronic capabilities:

1. Dual functions for Suspended Solids and Interface Level.
2. Programmable to display Suspended Solids in 0-10 grams per liter (0 to 10,000 mg/l).
3. Calibration shall not require an immediate known value and it shall NOT require a saved or retained sample. It will sample and hold values until the correct value is entered.

The analyzer shall have built-in self-diagnostic functions which at least will include:

1. Faulty sensor or electronics
2. Sensor cannot be properly zeroed
3. Attempt to Span in zero condition

The analyzer shall have the following specific programming capabilities which must be set properly to access the programming functions:

1. One Button selection of either Suspended Solids or Interface Level mode.
2. Independent "Zero" functions for Suspended Solids and Interface Level.
3. Independent "Span" functions for Suspended Solids and Interface Level.
4. A programmable response time in the Suspended Solids mode of either ten or fifteen seconds.
5. A "Sensor Test" mode to display the received light in the sensor.
6. Programmable Automatic Shutoff for saving battery power.

THE SENSOR

The sensor shall be Royce Technologies Model 71 or approved equal. It shall be a single gap optical sensor with twenty five feet of Kevlar internally reinforced cable. The cable shall be marked in one foot increments. It shall be constructed of poly-urethane and optical grade ground glass lenses.



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