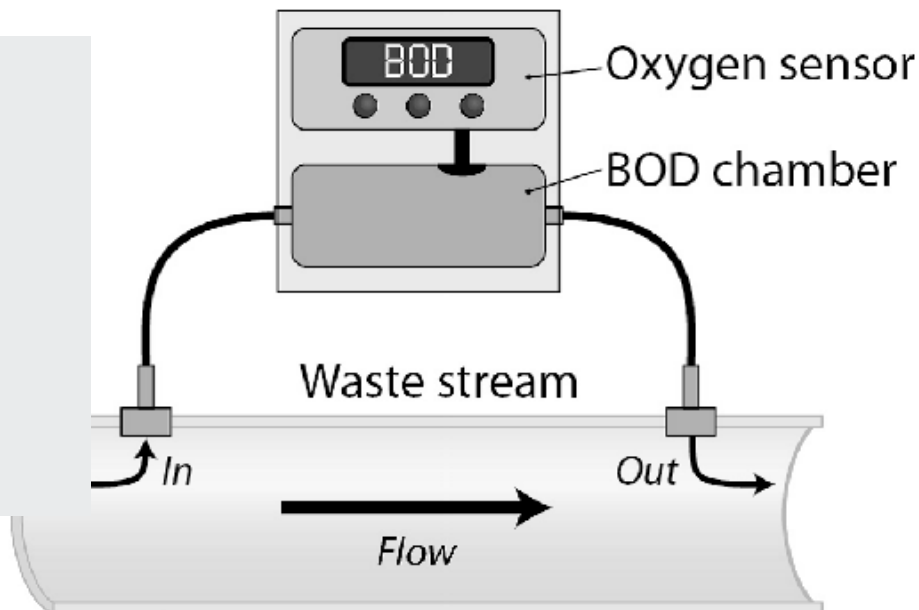


IN-LINE, REAL-TIME BIOLOGICAL
OXYGEN DEMAND SENSOR "AutoBOD-2"

U.S. Patent No. 9,188,512



REAL-TIME
FEEDBACK
CONTROL

WET
CHEMISTRY
FREE

NO SAMPLE
MANIPULATION

MULTI-UNIT
DEPLOYMENT
CAPABILITIES

MINIMAL
OPERATOR
TRAINING

Overview: Over 16,000 wastewater treatment plants (WWTP) exist in the US. For all of these facilities, energy costs associated with sludge aeration accounts for between 50 and 70% of operation costs. WWTPs generally practice aeration with set Dissolved Oxygen (DO) targets and control these levels without consideration of the actual moment-to-moment oxygen requirement of load present in a tank. Real-time feedback control of aeration levels based on Biological Oxygen Demand (BOD) has the potential to reduce overall plant costs by 3-6%.

Technology: AutoBOD-2 technology brings reagent-free, real-time BOD measurement and process control capability to the wastewater treatment arena, providing data for control of aeration for optimal digestion. Matching aeration level to oxygen demand will reduce wastewater treatment operating costs. AutoBOD-2 is an inline, remotely operated, flow-through system featuring micro-processor based control and data processing to measure oxygen consumption on undiluted wastewater samples. Oxygen consumption is tracked in real-time in dark, air-tight chambers using optode technology. No wet chemistry is involved and the in-line device may be operated and maintained by personnel with minimal training. The system has the capability for multiple unit deployment within a single facility.

The issued patent claims provide broad coverage for in-line BOD measurement employing any oxygen measurement technology. WHOI is considering a startup to complete the development of AutoBOD-2 (inline).

