

SERVOMEX SOLUTIONS

GAS MONITORING FOR PROCESS AND EMISSION CONTROL AT WASTE WATER TREATMENT PLANTS

CO₂ C₂H₆ HCl CO CH₄ NO COCl₂ N₂O

OXYGEN ENHANCED ACTIVATED SLUDGE: MONITORING OXYGEN IN DIGESTOR VENT FOR CONTROL

The pure oxygen from the plant air separation unit is directed to the first stage of the aerobic digester tanks. An oxygen measurement made at the digester vent is used to control the entire system's oxygen content.

An analyzer capable of analysis at a 30-40% oxygen range is required, such as a paramagnetic oxygen analyzer model 1800 or 2200. The paramagnetic oxygen unit is non-depleting and offers a lower operating/maintenance cost than electrochemical cells, which deplete faster at high oxygen levels and require routine cell replacements.

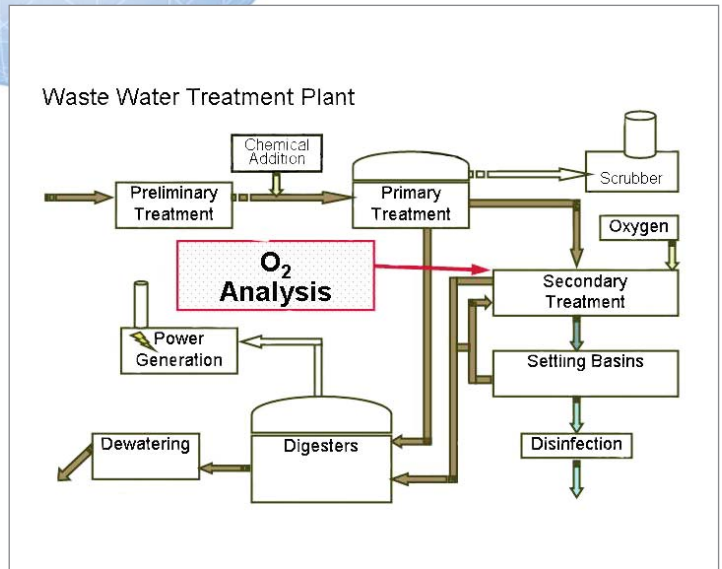
OXYGEN ENHANCED ACTIVATED SLUDGE: MONITORING OXYGEN GENERATION FOR CONTROL.

Gas measurements are made to control the operation of the Air Separation Unit (measure oxygen only), or the cryogenic unit (oxygen plus CO₂, N₂O). These units supply pure O₂ for the plants aerobic digestors for secondary treatment.

A high performance analyzer capable of accurate analysis at a 95-100% oxygen range is required, such as a paramagnetic oxygen analyzer model 4100 or 2200 with a pressure compensation feature. Typically one unit per site.

MONITORING SLUDGE BURNERS FOR EFFICIENCY

A model 2700 analyzer is used to measure oxygen in the combustion area for sludge burner control. The 2700 utilizes zirconia cell technology and is available with pre-engineered utility panel to manage aspirator and autocalibration gas control. The 2700 has available filters for high temperature - high particulate operation.



MONITORING SLUDGE BURNERS FOR EMISSIONS

A model 1440D and/or 4900 are used for O₂, CO, NO and SO₂ monitoring.

REFERENCES:

National Fire Protection Association: NFPA 53 Oxygen Service. Pertains to cleaning of tubing and components to maintain the safety of systems used in enriched (>21%) oxygen service.

SERVOMEX

Servomex has provided fixed gas analyzers and analyzer systems to waste water treatment industry for over 30 years and is a leading supplier to both end-user plants and integrators.

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Servomex has a policy of constant product improvement and therefore reserves the right to change specifications without notice.



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