NEW GENERATION OF MULTISTAGE BIOREACTORS MSABP™

Introduction

The familiar problems for wastewater treatment in small populations, caused mainly by high energy costs and the need for qualified personnel for operation and maintenance of facilities, call for the emergence of new systems that facilitate these processes. MSABP system is presented as a highly effective alternative for solving these problems because its simple treatment process involves a minimum number of electromechanical equipment and does not require the participation of qualified personnel.

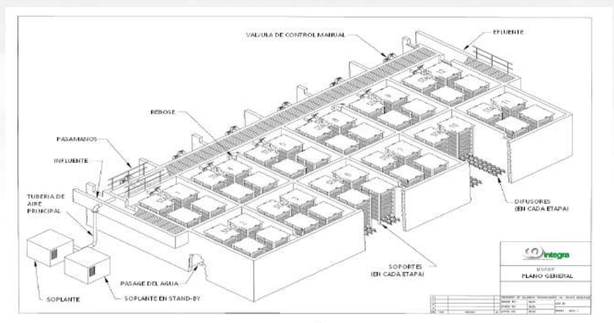
Methods

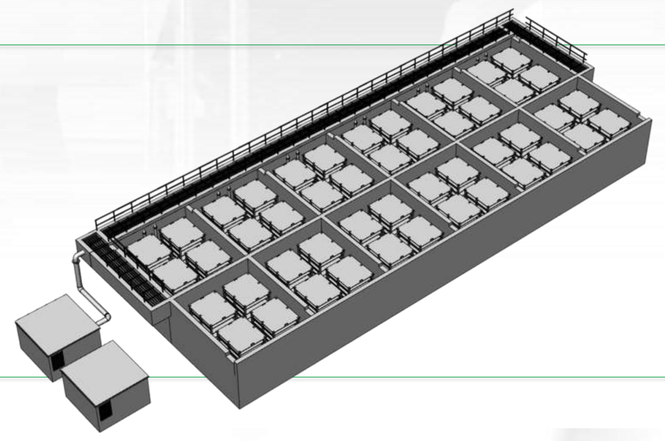
The MSABP™ (Multi-Stage Activated Biological Process) is an innovative and advanced proprietary process for treatment of municipal and industrial wastewater based on spatial microorganism succession and trophic hydrobiont chains, created by nature in different environments connected in serial. MSABPTM reactor consists on a small compartment basin with biomass supported over a no wear fixed special textile media.

Results & discussion

MSABP™ key advantages:

- No waste sludge treatment
- No primary or secondary settling required
- No return sludge pumping
- Hydraulic and organic shock load stability
- High quality effluent
- Energy efficient operation
- Compact footprint
- Adaptable to existing treatment processes





Conclusions

Waste water purified in the bioreactor is suitable for direct pouring to rivers or to be sent to further treatment processes like tertiary treatments for reuse.

Process control is natural, simple and automatic and requires very little operator attention. Process, equipments and maintenance are also basic and minimal.

References in Spain

MUNICIPALITIES

- Villalbilla (MADRID) 1200m³/d
- Villarrín de Campos (ZAMORA) 150m³/d
- Marugán (SEGOVIA) 75m³/d

INDUSTRIAL

- Lafarge cementos (TOLEDO) 50m³/d
- Baltasar Moralejo e Hijos (Cheese producer)(ZAMORA) 36m³/d
- Talleres Acciona (MADRID) 15m³/d

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