LUTRA-HOLLAND & K-PACK-BIO SYSTEMS- INDIA INTRODUCE

DOMESTIC WATER RECYCLE SYSTEMS

WHO IS LUTRA ?

LUTRA MILLIEUSYSTEMEN BV is a Dutch company engaged in revolutionary design and treatment systems for treating household and other water recycle systems in Europe. Their systems are all tested, certified by the KIWA and approved by the Dutch government.

RECYCLE THEORY :

The Lutra system is based on the principle of an immersed oxidative bed: water is cleaned biologically by micro organisms (active sludge) that attaches itself to the carrier material in the aération compartment. The surplus of this active sludge settles in the last compartment, the clarification tank and clear water is discharged

DESCRIPTION.

The Lutra compact system is an individual treatment for wastewater. Wastewater runs over loose packing through different compartments. In principle there is no cell force pump necessary for the supply or transport of water.

compartment
- secondary settlement tank
- pumping station
- cubicle.

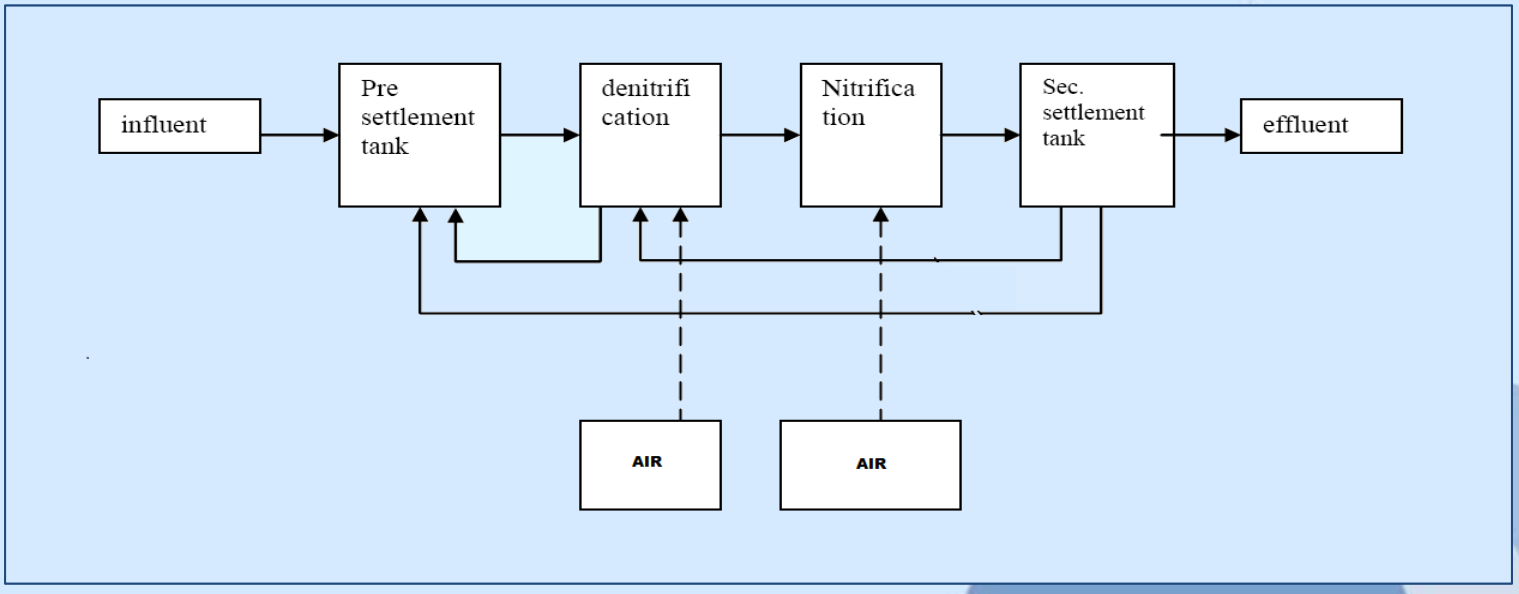
PRETREATMENT

Wastewater from a residence and/or business travels through the sewer to the pre-treatment tank. Organic material in the wastewater settles and/or floats, and is partially broken down. Floating material (fat and similar) is stopped at the exit. The now pre-treated wastewater runs through the exit to the Lutra system.

USAGE

The installation is intended for the treatment of household wastewater around 5000 LPD (for up to 6 persons). However this can be upgraded to higher capacities by larger tanks or by more tanks in series.

Rain water needs to be collected separately.



The system operates without electrical pumps for the supply or transport of water . In case of power failure, the discharge will not be obstructed.

The first compartment is a sedimentation tank. Because of this relatively large volume, any peaks cleared. This also has a large buffer for the secondary sludge. After sedimentation the water flows into two aeration compartments. The first compartment, is only briefly aerated (approx 45-60 seconds/h)and used for denitrification (anoxic, coarse bubble aeration, stirring action). The second compartment, nitrification compartment, is aerated (aerobic) for about 50 minutes/h (maximum capacity). The third compartment is a secondary settlement tank.

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In this clarifier, two airlifts are installed
• for transport of the settled sludge sedimentation (B)
• recirculation of treated water to the denitrification compartment(C)
Settled sludge is pumped back to the pre settlement tank by an airlift, for about 3 minutes/h. The quantity of recirculated water ensures a certain delution of the influent in the pre settlement tank, and is benificial to the stability of the system.

Another airlift re-circulates water from the sec. Settlement tank to the nitrification compartment. This airlift works simultaneously with the aeration of the nitrification compartment. The quantity of this recirculation is crucial for a proper denitrification

ADVANTAGES

- Intermittant aeration savings on energy costs
- No moving or electrical parts in the tank: less maintenance
- Relatively large pre settlement tank: less maintenance, better performance
- Control unit; mini PLC
- Aeration by means of blower, low noise level
- Power consumption: ca. 0,06 kW

1200 LPD SYSTEM

LARGER CAPACITY SYSTEMS

SUBMERED

AFTER INSTALLING

LUTRA MILIEUSYSTEMEN

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