

**PROCESS AND REACTOR FOR ANAEROBIC WASTE WATER
PURIFICATION**

Abstract

The invention is directed to a process for the anaerobic purification of waste water using a sludge bed system, which process comprises feeding waste water, and optionally recycle water, to the lower part of an upflow reactor, containing mainly granular biomass thus producing biogas in the treatment passing the resulting gas/liquid/solid mixture upward and separating the gas and solid from the liquid in a three phase separator and thereby generating an anaerobic effluent that is withdrawn from the top of the separator, the improvement comprising separating the solids from the liquid in a separator, wherein, above the separation of the gas from the liquid phase, tilted plates, tubes or other tilted internals are installed in the three phase separator body to increase the effective settling surface, to an upflow reactor suitable for this process as well as to a three phase separator.

Figure 1