

16.- BIODIGAT-SB, anaerobic treatment

Title and name of product or technology	
BIODIGAT - SB	
Abstract	
The BIODIGAT-SB Process is suited to the anaerobic (pre-) treatment of effluent that mainly has a dissolved content of pollutants, and large volume flows or high COD loadings.	
Description including main features/advantages	
<p>The key component of the BIODIGAT-SB is a special EGSB Reactor (Expanded Granular Sludge Bed). This is a further development of the well-known UASB Process (Upflow Anaerobic Sludge Blanket). As a result of selective recirculation in the reactor, as well as by enhanced effective phase separation devices, greater volumetric loadings can be achieved in this manner.</p> <p>The advantages of anaerobic bioreactors are:</p> <ul style="list-style-type: none"> • No aeration is necessary. • A gain in energy use as a result of biogas. • The production of excess sludge is about 80 % less than with aerobic processes. • The plant can be quickly put back into service, even after long downtimes. • Several substances are only able to be degraded by using anaerobics (e.g. pectin). 	
Innovative aspects	
The process is characterised by a high yield of biogas, whilst having at the same time low operating costs. The 3 Phase Separation (the ACS Process) for which several patents have been applied, which takes place completely inside the reaction vessel, increases the efficiency of the performance of the system with a low cost of construction by comparison with other EGSB systems.	
Current and potential industrial users/domains of application	
<p>The applications of the BIODIGAT-SB are for example:</p> <ul style="list-style-type: none"> • Food Industry • Paper effluent • Beverage Industry • Processing of fish 	
Current state of development	
During 2009 Wehrle Umwelt has built up two Biodigat SB Processes for the food and food processing wastewater, respectively. The commissioning is due to October 2009.	

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