



Case Study:

FES Acatlán UNAM

State of México, México. 2015.

Client problem

Based on its commitment to the conservation of the environment and in its role as an international leader in the field of education and research, the authorities of FES Acatlán (Institute for Higher Education of the National Autonomous University of Mexico -UNAM-) determined to carry out the construction of a wastewater treatment plant (WWTP) within its facilities with the purpose of:

- Have a considerable reduction in discharge of untreated wastewater generated by the student community.
- Decrease the use of potable water for green-areas irrigation. Instead, use treated wastewater.
- Have demonstration treatment facilities for academic purposes for the student community of the University Campus and for another UNAM units.
- Have an adequate management and disposition of the byproducts (sludge and biogas) generated by the operation of the WWTP.
- Have facilities that can be complemented to study energy sources (biogas).
- Use the treated sludge for soil improvement of green areas.

IBTech®'s solution

- Construction of the WWTP with the unit operations needed to meet the requirements. The maximum capacity of treatment is 7.5 lps (27 m³/h)
- The heart of the process is an UASB reactor.
- Implementation of biofiltration systems (compost) for odor control in the homogenization tank and in the UASB reactor.
- Treatment and dewatering of sludge for a safe disposal.

Results

- Nowadays, FES Acatlán has enough infrastructure to treat its wastewater optimally and fulfilling the objectives for which the WWTP was designed.
- The biogas and sludge produced in the WWTP, byproducts of wastewater treatment, are properly handled. The biogas is safely disposed in a burner and the sludge meets the standard to be used as a soil improver.
- The WWTP has its own laboratory equipped to determine the required parameters for good control of the process.



WWTP general view



WWTP general view



Biogas burner



Compost biofilter for odor control



Contact tank with chlorine



Filtration system

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