

**Case study:**

Modern Packing San Pablo

State of Mexico, Mexico. 2014.**Client problem**

Modern packaging San Pablo (Empaques Modernos San Pablo -EMSP- in Spanish) is a Kraft paper factory. Wastewater generated in its production is treated in a WWTP built in 2008, which is based on an anaerobic-aerobic biological process.

- Initially, the WWTP fulfilled intermittently with the aim of treatment defined by the related Mexican regulations.
- After operating for 5 years, the PTAR began to present operation problems as well as deterioration of their physical structures due to the high salts content (calcium and magnesium) that caused severe fouling, particularly in the pre-acidification tank and the anaerobic reactor (EGSB reactor, modality IC®). For this reason, the operation of the WWTP was stopped and major maintenance was carried out.
- Some modifications to the process aimed to reducing salt fouling were performed, which consisted of a strict pH control and the IC reactor was re-started.

IBTech®'s solution

Rehabilitation of the WWTP, which consisted of:

- Cleaning and dredging of the pre-acidification tank and the anaerobic reactor IC®
- Supply of equipment, instruments and accessories specifically for the needs of the treatment process.
- Correction of biogas lines and modification of discharge pipes of the IC® reactor
- Modification of the control program (SCADA and HMI)
- Supply of a treatment system for odor elimination based on a physicochemical/ biological process (IBTech® design)
- Start-up of the WWTP

Results

- Start-up of the WWTP complying consistently with the water quality established in Mexican regulations. Specifically, the IC reactor reached an average efficiency of 76%, which in the five years prior to this project, had never reached more than 43%.
- Odor treatment system that operates properly fulfilling the purpose for which it was designed
- The "bioenzymatic nutrient" previously recommended by a third party was discontinued, which substantially reduced the operating expenses of the WWTP.



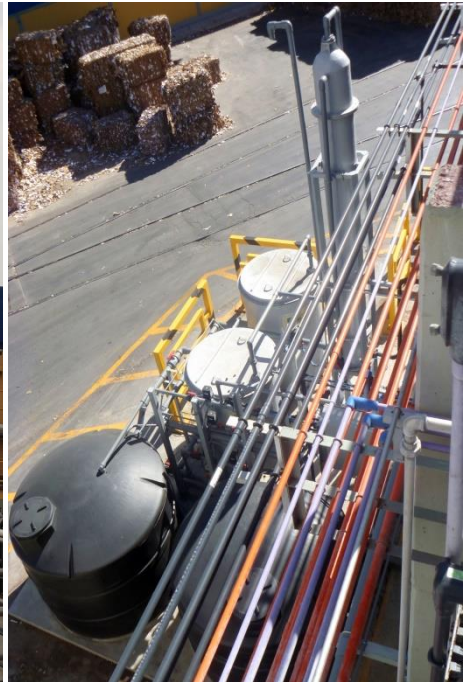
Scrubber and compost biofilter for odor control



Scrubber and compost biofilter for odor control



Biogas burner



Scrubber and compost biofilter for odor control

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