Water Treatment Plant in La Llagosta, Barcelona

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The purpose of this plant is to treat the domestic and industrial wastewater generated in La Llangosta and other towns nearby. Of special interest in this job is the dynamic compaction method used on the ground where the plant was built. The facility was prepared for a physical-chemical treatment process.

Location	**La Llagosta (Barcelona)**
Customer	**Junta de Sanejament de la Generalitat de Catalunya**
Capacity	**43,000 m^3/day**
Population	**233,000 e.i.**

This plant returns treated water to the Besos River with an average flow 1,792 m^3/h, the maximum being 5,376 m^3/h. It was designed for a 50% increase in capacity. The plant's physical-chemical process includes:

The water line consists of a solids pit, pumping station at the head of the plant with three 1,702 m^3/h pumps, roughing with 5 mm Acuaguard screens, two aerated grit and FOG removal lines, flow meter in Parshall channel with a 1.52 m throat; quick agitation type mixing chambers, two double flotation chambers with slow agitation; two 34 m diameter settling tanks; treated water flow meter employing magnetic meter in 1,200 pipe and outlet works.

	Input	Outlet
DOB_5	**500 mg/l**	**12 mg/l**
SS	**500 mg/l**	**35 mg/l**
Sludge production		**60 T/day**
Power installed		**557 Kw**

The sludge line consists of a primary sludge pump with three 80 m^3/h motor pumps, chemical stabilization for sludge with lime bed, gravity type sludge thickening unit, thickened sludge pumping unit, mechanical dehydration with spinners and 100 m^3 storage hopper.

The facilities are controlled and managed using a computerized system.

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