

## Wastewater Treatment: Mixed Solids Removal

Meat Processor pre-treats with Externally fed Screen and Dissolved Air Flotation (DAF).  
Stuart Ward of *Process Engineered Water Equipment* explains system design...

### Case Study

For over 55 years Williams Sausage operated with the belief their Country Flavor Formula would sell sausage. They blend only the finest whole hog cuts flavored with a family recipe of the finest herbs and spices, without adding sugar. It worked, so starting with a single truck the firm grew from western Tennessee to a



Existing WWT Lagoons

national firm which has required many plant expansions. And with the focus on producing quality products plant discharge was the last area getting attention. The lagoon system was simply outmatched for the necessary wastewater treatment from such a major pork processing facility.

PEWE personnel surveyed the situation and designed an effective treatment system. A plan was presented with a detailed equipment layout and specifications for the extensive project which would process wastewater at a rate of 250gpm.



PolyAccu Dose LD-20D

### Complete WWT System

The new system included a sump pit, transfer pumps, an externally fed PEWE *SuperSkreen™ SSE* for gross solids removal, an EQ balance tank with pH control, flow proportional feed by a PEWE *PolyAccu Dose™* chemical make-down unit, a stainless steel PEWE *HD²XLRator™* DAF unit complete with modern Rogue *MAX RGT™* regenerative turbine aeration. And the new plant is fully automated with a PEWE *Command Control™* panel.

The equipment was delivered right on schedule and followed later by the PEWE Technical Services support team for start-up. Learning the new system was straight forward and readily mastered by the maintenance crew. The screen automated wash cycle was set, the chemical dosing calibrated and the dissolved air flotation DAF unit aeration tuned. The system could then start automatically and efficiently treat the water without fail.



SuperSkreen SSE

### Final Results

Upon start-up the new wastewater pretreatment system immediately achieved results. The total suspended solids (TSS), fats oils grease (FOG) and



DAF & Custom Mezzanine

biochemical oxygen demand (BOD) were removed below discharge requirements. Sludge solids are pumped to a custom built steam heat-able tank for later oil recovery and disposal.

### Pay Off

Williams Sausage is quite satisfied with the new wastewater treatment plant. The local POTW can now count on consistent discharge. With the Union City production facility expanded and sporting a beauty of a wastewater system, Plant Manager Tommy Ray Sr commented "this is going to be the first place we will bring customers" as they are especially proud of their **Green** achievement.



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