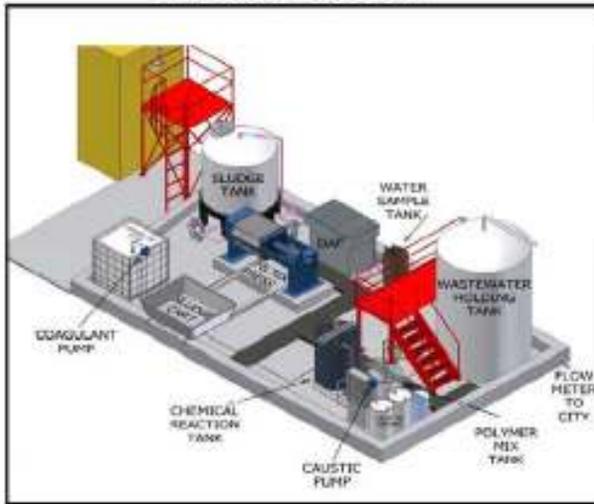




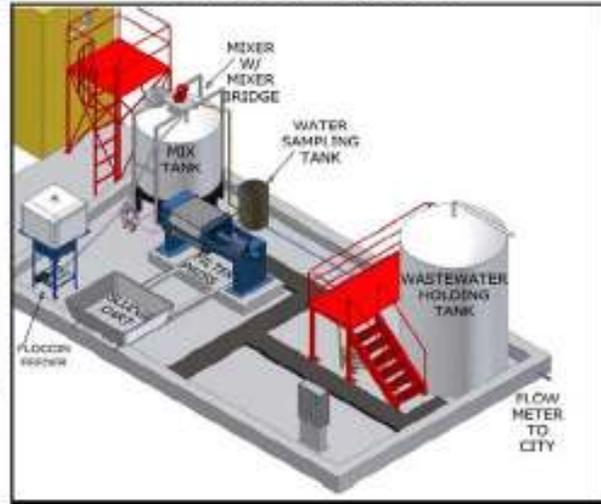
Corrugator System Modifications

A corrugating facility was using a dissolved air flotation unit with conventional chemistry (aluminum chloride blend, caustic to raise the pH and a polymer) to remove the inks/contaminants from their wastewater. The facility treats 2,000 gallons/day. The process was Equalization in the Holding Tank, transfer at 10 gpm to the reaction tank (the aluminum chloride was added inline upstream) where caustic was added to raise the pH from 4 to 7^{+/-} and polymer, then the water is pumped into the DAF system where the solids are floated and skimmed off and the water flows to the local POTW. The chemicals costs were \$175/day and the system required a full time operator to monitor the system to insure the water quality discharged met their permitted levels. The facility was paying \$45/container for return or disposal (fee charged by the chemical company to clean the totes/drums) of the chemical containers which added up to over \$300/month.

Existing System



Proposed System



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Integrated Engineers proposed some modifications to their system to reduce the labor involved, simplify the process as well as treatment costs. The Floccin products were tested and since it is a 1 treatment product, this eliminated the rest of the chemicals and their container disposal costs. The system was modified as shown in the 3-D image.

The Sludge Tank was modified to be the Reaction Tank and a Mixer was added. The process now is to transfer 2,000 gallons to the Mix Tank, add the Floccin, Mix, settle, decant the clear treated water to the POTW and press the solids in the Filter Press. The system modification costs: \$24,000

Previous Process Floccin Process

Chemical costs: \$175/day	Chemical costs: \$75/day
8 hour/day labor	2 hour/day labor
50 lbs D.E. as precoat = \$16/day	No precoat required
Drum/Tote disposal fees	No container disposal fees
Sludge is hazardous	Sludge is nonhazardous (TCLP/STLC)

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