



Sewer pretreatment results just not good enough? . . .

Then have a look at ***Suspended Air Flotation (SAF™)*** by Heron Innovators.

That's what ***Kendall Jackson Winery*** did at their Santa Rosa, California bottling plant.



Kendall Jackson generates up to 35,000 gallons per day of wastewater from washing of wine bottling process vessels and piping. The wastewater is treated in a series of lagoons prior to discharge to the Santa Rosa Wastewater Treatment Plant. Treated wastewater suspended solids concentration was between 500 and 600 mg/L due to algae growth and solids accumulation in the final pond, far exceeding the pretreatment limitation of 50 mg/L imposed by the City of Santa Rosa.

A six-month test treating the pond effluent using Dissolved Air Flotation was unsuccessful in reducing the suspended solids to less than 130 – 150 mg/L. An acceptable solution needed to be capable of treating up to 200 gpm to meet pretreatment limits, and able to be relocated to treat different ponds.

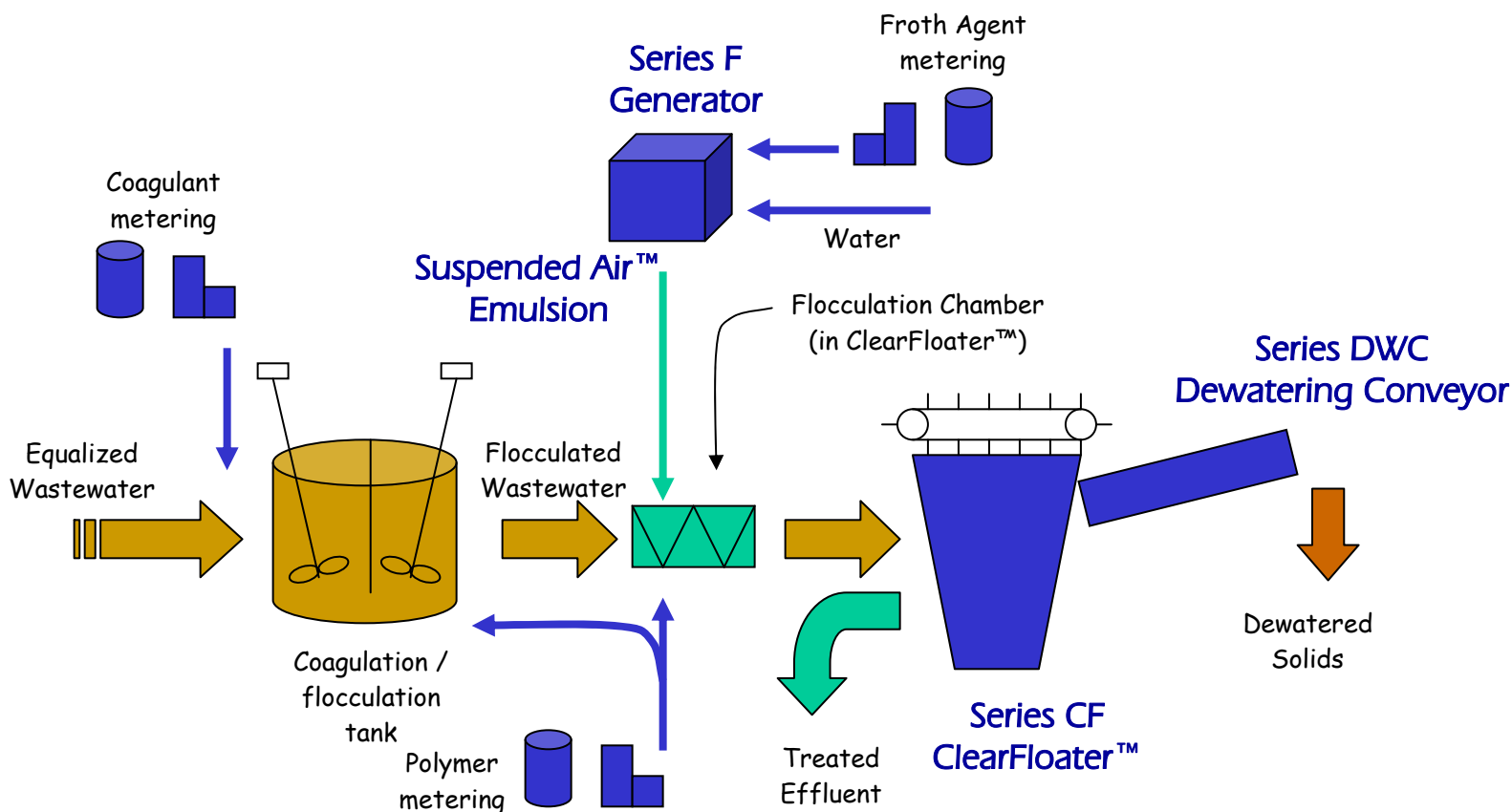
Heron Innovators provided a 200 gpm capacity SAF™ pilot plant trailer in late summer 2004, with sufficient capacity to

treat the entire permitted daily discharge of 35,000 gallons over a 4 to 6 hour period.

Wastewater pumped to the flotation process was flocculated with a cationic polymer, and effluent suspended solids were reduced to less than 10 mg/L. The original one-month pilot run was extended to five months due to better than expected treatment results. Kendall Jackson purchased a 200 gpm capacity ***Model SAF125™ Suspended Air™ Flotation Treatment System*** mounted on an 8' x 20' skid, including an 1,800-gal. agitated conditioning tank, Model CF125 ClearFloater™, and a Model F25 Suspended Air™ Emulsion Generator. It was installed in June 2005 and was fully operational within one day of delivery.

The SAF™ system is achieving results similar to the pilot plant results. SAF™ effluent suspended solids are consistently much less than pretreatment limits.

Kendall-Jackson references can be provided on request.



Typical SAF™ Wastewater Treatment Schematic

TYPICAL APPLICATIONS (partial list)

Food, Dairy, and Animal Products Processing: Removal of suspended solids from screened raw wastewaters, with thickening of recovered solids.

Municipal Wastewater: Waste activated sludge thickening, primary clarification with grit removal, secondary clarification with solids thickening.

Wastewater Effluent Ponds: Removal of algae and other suspended solids for direct discharge or as a polishing step prior to tertiary filtration.

Water Treatment: Removal of suspended solids as a polishing step prior to filtration. Increases filter run time between backwashes.

Oily Wastes: Removal of emulsified oil from water (air compressor condensate, vehicle wash water, oilfield produced water, etc.).

OPERATIONAL ADVANTAGES

SAF™ is re-writing the book on flotation technology, replacing DAF as the method of choice for removal of suspended solids from wastewater.

SAF™ flotation tanks are less than 20% as large as DAF tanks for the same treatment rate. Because of the high air content of Suspended Air™ Emulsion, a SAF™ system can be just as effective as a DAF using only 2% of the power for air generation. Floated solids are gelatinous and can be dewatered by simple gravity drainage. The SAF™ System can successfully treat wastewaters containing as much as 15,000 mg/L of suspended solids with removal rates greater than 90%. In many cases effluent suspended solids are less than 5 mg/L.

SYSTEM FEATURES AND OPTIONS

Standard Features: Systems are supplied complete, pre-engineered and ready for on-site assembly, including a dual compartment conditioning tank, coagulant metering pump, polymer activation system, Series F Suspended Air™ Emulsion Generator, Series CF ClearFloater™ Flotation Separator, Series DWC Dewatering Conveyor, and NEMA 4X electrical control panel containing all controls, displays, and motor drives.

Series DWC Dewatering Conveyor: Conveyor belt is a polypropylene chain belt with wedge cross section openings approximately 0.038" x 0.25", driven at approximately 5 feet per minute by a variable speed gearmotor.

Optional solids pump: Peristaltic hose pump for conveyance of dewatered solids to disposal or further processing.

***Don't be fooled by imitators - always ask for:
Suspended Air™ Flotation - by Heron Innovators, Inc.***