

V-Fold Folding Belt Filter Press Case Study No. 3b - Tannery Wastewater (waste activated sludge)

THE PROCESS

Wastewater from a cattle hide tannery (15,000 hides/week) is settled in primary “precipitators” then biologically treated in an aerated lagoon with 10 days holding capacity (6 MI with 5 surface aerators). The lagoon overflows to a secondary clarifier, then to a “polishing pond” (1 MI with one aerator) and finally an 80 MI balance dam before being pumped onto pasture for irrigation.

The secondary clarifier underflow (waste activated sludge) is either recirculated to the aeration lagoon, or “wasted”. In the past waste sludge was tankered away for direct injection into soil. However, this was expensive and the tractor was unable to work when the pasture was wet after heavy rains.

Waste activated sludge is now pumped to a surge tank then dewatered through 4 **V-FOLD™** model SS600 filters operating in parallel. Filter cake is blended with sawdust and converted to compost using a windrow technique.

PERFORMANCE¹

Waste activated slurry is typically fed to each **V-FOLD™** at 600 litres/hour (with about 3 - 4% dry solids) and typical filter cake contains more 19 - 20% dry solids.

BENEFITS

- Tannery Staff estimate the entire dewatering & composting system will pay for itself in less than 3 years. Also, its capital cost was significantly less than conventional dewatering systems they investigated.
- The **V-FOLD™** makes a filter cake that Tannery Staff have found easy to compost.
- The **V-FOLD™** is able to operate continuously (often 24 hours/day) without frequent Operator intervention usually required with variable feeds on other filters.



General Arrangement of multiple **V-FOLD™** filters



Aeration lagoon (6 M litre)



Filter cake

¹ NOTE: As with all filters, performance depends on prevailing conditions and data noted here is specific for this particular factory at the time of testing.