CASE STUDY

Rotoshear®

Oxnard Frozen Foods

Rotoshear® unit slashes disposal costs

Problem

Oxnard Frozen Foods, located in Oxnard, California, is a major regional frozen food processor that specializes in preparation of frozen broccoli, spinach, and lima beans. The plant operates at capacity processing approximately 300,000 pounds of broccoli and 1,000,000 pounds of lima beans each day throughout the year. In addition, about 200,000 pounds per day of spinach is processed for nine months of the year.

During preparation, the food is trimmed and the trimmings flow to a central processing point for liquid/solid separation from approximately 2 MGD of flume water. Screenings are hauled as cattle feed to local ranchers and the liquid is processed by the local wastewater treatment plant.

Vibrating screens were originally used to separate the trimmings at the central processing point. Considerable operating problems were encountered and, according to the operators, the screens constantly required mechanical repair. Screen blinding was common and the screenings were very wet.

When the machines were down for maintenance, the solids in the total plant effluent increased, resulting in higher sewer surcharges from the waste treatment plant. Faced with a solids hauling rate of $8.84 per ton and a $500,000 per year sewer surcharge, it was mandatory that Oxnard Frozen Foods re-evaluate their total liquid/solids separation scheme to reduce their waste treatment costs.

Solution

Oxnard's study resulted in a two part plan. Phase one called for replacing the vibrating screens with an efficient, low maintenance screen to capture the trimmings that had been clogging pumps, valves, pipes, and overflowing and blinding the vibrating screens. Ideally, this new screen would also produce drier screenings and reduce handling and hauling costs.

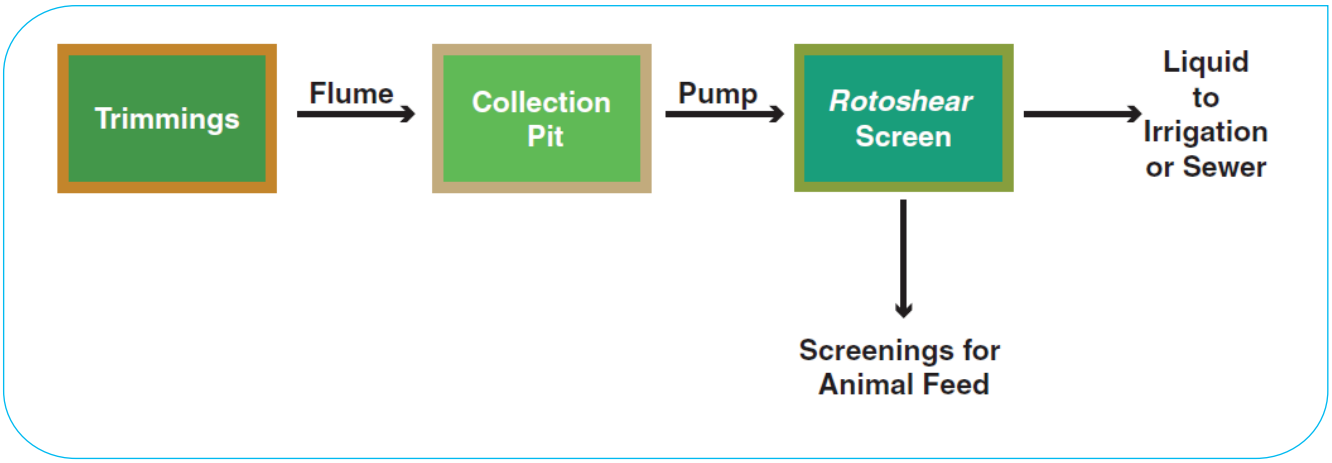
The second phase would eliminate the discharge of flume water to the City. Instead, this water would be reclaimed and used for irrigation. To prevent pollution, the irrigated effluent must be free of solids, so the selection of the proper screen in phase one was vital.

Results

Oxnard Foods selected a Parkson Rotoshear® automatic wedgewire screen, Model HRS6072 with 0.020" openings. The screen is extremely effective and has significantly reduced the amount of solids and BOD discharged to the treatment plant. The captured trimmings are drier, easier to haul and more desireable as animal feed.

The Rotoshear® screen has also alleviated labor. The screen operates automatically without supervision. There is no blinding or messy overflow to clean up, and no downtime for manual cleaning.

Having successfully completed this vital first step of liquid/solid separation, the company is in the planning stages of the second phase of the program where an irrigation supply system will be in operation and provide an additional savings of approximately $500,000 per year sewer surcharges.



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