

CASE STUDY

Rotoshear®
Farmland Foods



Rotoshear® screen keeps dehairing line waste out of lagoon system

Challenge

The Farmland Foods pork slaughtering and processing plant in Denison, Iowa has its own anaerobic lagoons and trickling filter plant for wastewater treatment. However, in order to keep the lagoons functioning efficiently, the processor must remove the fine, floatable animal waste which consists primarily of animal hairs and toenails from the dehairing and scalding operations.

Solution

Farmland Foods selected a Rotoshear® automatic wedge-wire screen, Model HRS- 3648, with .030" (0.75 mm) screen openings. The flow through the dehairing area is approximately 200 GPM (45.5 M3/H), but the screen had to be able to handle surges in excess of 500 GPM (113.6 M3/H) during washdown.

The Rotoshear® screen proved to be quite effective. It could handle high concentrations of fine animal hair, meat particles, fats, pieces of carcasses, and even toenails without blinding the screen. The rotation of the screen cuts through the flow perpendicularly and forces solids

onto the screen so they agglomerate and roll along the length of the screen without becoming caught between the wedge-wire openings.

The screen works extremely well, and consequently, so does the lagoon system. There is less waste to handle as a result. In fact, screening also keeps these particles from clogging pumps and other downstream equipment. The addition of one Rotoshear® screen, strategically positioned to screen the effluent flow, alleviates the potential for a problem.

The hair that is captured by the screen continues through to a hair belt and is reclaimed as a valuable by-product which is given to a local renderer. Consequently, waste hauling and disposal costs are eliminated. The amount of recovered by-product can be substantial, depending on the production load. At this particular plant, it's not uncommon for 4000 lbs. of hair and toenails to be eliminated daily. And it's all handled easily by one efficient Rotoshear® screen. ■



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