

Pumps ensure smooth wastewater management

Often one of the biggest headaches for a food manufacturer is industrial wastewater. It's a near perfect world where this problem is handled efficiently, economically, responsibly and even profitably. Enter the near-perfect world of J.R. Simplot Company.

J.R. Simplot Company of Caldwell, Idaho, found that disposing of vegetable peelings and waste could be time-consuming, messy and expensive at its potato processing plant in Caldwell, Idaho. Simplot manufactures a wide array of potato and vegetable products for numerous restaurants and food suppliers. Its frozen potato line consists of more than 120 varieties of french-fried potatoes and formed products such as potato nuggets and hash browns. The majority of these products, packaged under Simplot brands and private labels, are marketed domestically and internationally to the food service industry. Customers include fast food, casual and fine dining restaurants.

The Caldwell plant processes approximately three million pounds of potatoes daily. The resulting potato waste is converted into ethanol, which is blended with gasoline and marketed to Idaho motorists.

Previously, the waste was pumped by means of lobe pumps into a bin at the end of the inspection conveyor. It was then transported manually to another bin that could hold a capacity of only six to seven tons. From there, the waste was sent to a nearby facility that fermented it, converting it to ethanol. However, the lobe pumps frequently broke down. The resulting downtime was costly: first, the waste had to be transported by dump truck to the ethanol plant while the pumps were down; second, the repairs to the pumps were expensive.

The company turned to C. H. Spencer and Company in Pocatello, Idaho, to solve the problem. C. H. Spencer recommended a seepex 70-24 BTM pump, one of the seepex "T" range, open hopper chopper pumps. The BTM is equipped with an auger feed screw in front of the rotor and the stator. The "T" range pumps can handle highly viscous and non-flowable products at pressures up to 48 bar. The seepex BTM can chop and pump all kinds of fruits

and vegetables (potatoes, carrots, apples, and citrus fruits) in both the production and waste processes.

In the BTM, the feed screw is additionally fitted with rotating and stationary knives—a patent-



Potatoes start the process to fuel.

ed design—thereby thoroughly macerating the potato waste as it is being pumped. Water in the waste is released, eliminating the need for adding water in the pumping procedure. The waste can then be further processed, either into ethanol, fertilizer, or potato starch, which also has a wide variety of industrial uses.

Simplot purchased the open hopper chopper pumps with the seepex TSE device to ensure against dry run damage. All potato waste—hot peel waste, culls, and floor waste—goes directly into the BTM hopper from the peeler. Because additional grinders are no longer needed as part of the process, efficiency has increased dramatically. From the pump, the waste is transported through 2000 feet of 6-inch pipe to the ethanol plant. Replacement of its lobe pumps with the BTM design has greatly reduced downtime for Simplot. To date, the seepex pumps have never had to be shut down for maintenance. For a food manufacturer, increased productivity and effective handling of industrial waste may well be a perfect world. For more information, visit www.seepex.com

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