

AGGREGATES MANAGER

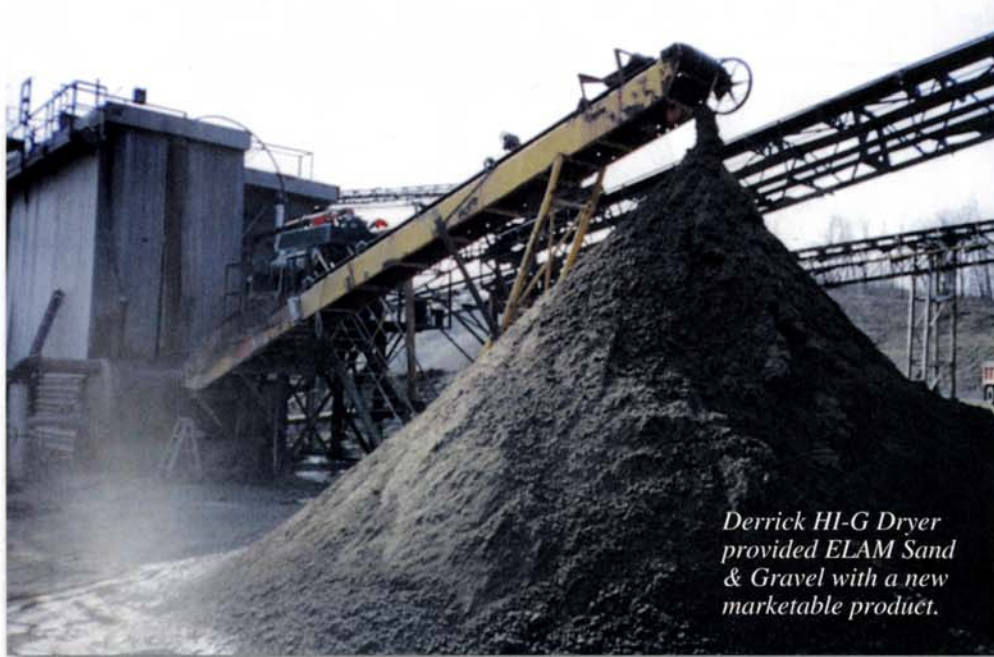
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ELAM S&G Streamlines Fines Management



Derrick HI-G Dryer provided ELAM Sand & Gravel with a new marketable product.

When ELAM Sand & Gravel, West Bloomfield, N.Y., boosted production at its plant, it likewise exacerbated its settling pond problems. With no means of efficiently handling by-product fines, David Spallina, president of ELAM, viewed this as the operation's largest production concern.

Spallina teamed with Donald J. Ruppert, product applications engineer for Derrick Corporation, Buffalo, N.Y., to find an efficient equipment design to handle the plant's by-product fines. ELAM opted for the Derrick HI-G Dryer, which it purchased early in 1999 for start-up by spring 1999.

During the 1998 operating season, Ruppert calculated the recovery percentages and equipment efficiencies to determine the required equipment through a series of sample extractions from all phases of the wash plant facility.

In 1998, the plant was processing 375 to 400 tph of sand and gravel, which had been generating 27.57 tph of by-product fines to three settling ponds. Upon start-up in the 1999 season, ELAM boosted production to 500 tph. The new production increase also increased the amount of by-product fines to 39.38. The byproduct fines generated by the plant generally consist of 45 to 50 percent 200 mesh to plus 400 mesh material, with the remainder being 400 mesh to minus 600 mesh dust.

Jodi Randolph, plant superintendent at ELAM described how the operation handled fines during the boosted production, prior to installation of the Derrick unit: "At that rate (500 tph plant production), we were cleaning our settling ponds once or twice a week. The excavation equipment requirement

the bottom line

ELAM Sand & Gravel, West Bloomfield, N.Y., incorporated a Derrick 4-in. hydrocyclone cluster with a newly purchased Derrick HI-G Dryer to reduce pond cleaning

and maintenance, as well as labor involved, was very intensive. Following cleaning, we had to let the harvested material from the ponds dry for a few weeks before we could handle it and try to re-screen it again. The costs were overwhelming."

ELAM now uses a Derrick 4-in. hydrocyclone cluster in conjunction with its HI-G force screening unit. According to ELAM, the operation is now effectively recovering 55 to 60 percent of the solids that used to be sent to its settling ponds.

The 21.65 to 23.28 tph of recovered solids are processed into a consistently stackable and conveyable form at 75 to 80 percent solids. "With the Derrick HI-G dryer now in operation, we have been able to not only extend the life of our settling ponds, but also greatly reduce

the equipment wear and labor requirements to maintain the settling ponds. We now only have to clean the ponds once a year, may be longer," Randolph said.

In terms of maintenance, Randolph said the unit is "virtually maintenance free, we simply start the unit along with our plant in the morning and let it go."

The Derrick unit accommodates feed fluctuations and process changes that take place upstream in the wash plant and balances itself.

"It's a nice benefit to have a piece of equipment that doesn't require manpower or require any chemicals or flocculants to make the fines recovery," said Randolph.

Payback of the unit has been short due to the creation of a marketable product by the Derrick unit. With no further handling, the material from the Derrick unit is being sold directly to customers.

According to Randolph, running the unit with high recovery rates since April has produced no wear on the unit.

"Mr. Ruppert's expertise and in-field support has been outstanding," said Randolph. "From the pump and custom plumbing recommendations to the follow-up sample work to evaluate the unit's performance, it truly has been a pleasure working with Derrick Corporation.

"We can see by the high quality construction of the equipment that Derrick Corporation takes pride in its manufacturing and assembly process. We look forward to a long-lasting relationship with them." ▲

requirements. The operation said it saved money on labor and equipment maintenance, while also creating a marketable product from fines recovered by the new set-up.