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Top Notch Performance Boost

Mosaic is the world's leading producer and marketer of concentrated phosphate and potash crop nutrient products. At the company's mining facilities, GIW slurry pumps provide a key component to Mosaic's success. The service agreement between Mosaic and GIW has provided an overall increase in equipment reliability and a dramatic decrease in emergency repairs and downtime.

Producing phosphate fertilizer products

Phosphate deposits were formed millions of years ago by the sedimentation of sea life. Phosphate deposits are generally found where there was once a sea, and the largest deposits can be found on the southeast coast of the United States, China and Morocco, with lesser deposits in Florida, Brazil and Russia. Phosphate is one of the primary ingredients in agricultural fertilizers.

Mosaic mines phosphate ores at its facility in central Florida, pumping the matrix slurry from mine locations to the Mosaic processing plant. These slurry pipelines can vary in length from half a mile to as long as 15 miles. For the longer pipelines, pumps are installed in series at approximately one mile intervals to keep the flow moving at a consistent rate.

GIW has developed pit pumps, particularly the LSA-62 slurry pump, specifically for Mosaic and the phosphate mining market. The LSA-62 slurry pump moves the phosphate ore from the slurry pits into the matrix lines that carry the phosphate matrix to the mine processing plants.

At the processing plant, Mosaic separates clays, sand and rock from the phosphate ore to make a concentrated ore product. From here the ore is transported to Mosaic's chemical concentrate plants where it is finally made into a granulated product for agriculture use as granulated crop nutrition products. Mosaic has developed a range of products to meet different agricultural needs and delivers its products to a variety of domestic and international crop growers.

Partnership leads to production improvements

According to Scott Yeo, GIW's Florida region manager, "Our mission is to provide Mosaic with the most reliable equipment possible. We work to find any improvements that will provide Mosaic with increased reliability and cost savings."

GIW is the sole supplier of slurry pumps for Mosaic's phosphate mining operation and has developed a continual improvement process that has helped Mosaic to maximize its production operations and reduce maintenance costs.

The maintenance system that GIW uses evaluates the condition of each piece of equipment and takes it out of service when performance begins to decline rather than waiting for failure. GIW repairs all of its equipment to original equipment manufacture (OEM) standards, which are much higher standards

than are typical when pumps are simply fixed to keep them operating. The repairs result in pumps that are just as reliable as brand new pumps — and far less down time.

GIW also provides a monthly KPI report that tracks all work performed and costs. The reports are produced on software developed by Doug Starner, GIW operations manager, specifically for tracking costs for GIW customers. By managing Mosaic's engineering information, GIW can summarize the repair history for each piece of equipment and itemize all of Mosaic's repair costs.

As a result of these higher standards, Mosaic experiences reduced costs in several ways:

- Higher repair standards mean longer equipment life.
- Proactive maintenance means pump wear is addressed before pumps fail, so unplanned downtime is reduced or eliminated.
- Mosaic personnel are freed to do their own jobs instead of continually maintaining pumps.

GIW is developing similar service agreements with some of its other customers to help them reach the level of success that Mosaic has achieved.

To learn about setting up a service agreement for your own company, contact Bob Kolodziej at GIW.

For more information on GIW products and services, call us at 1.888.TECHGIW (832-4449) or visit

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