Kistler-Morse®

Sonologic Products

case history

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Market: Bulk Grain Storage

CUSTOMER

United Grain Corporation, Portland, Ore., has a Vancouver, Washington storage terminal with a capacity of 5 million bushels. With a new high-speed gantry, the terminal loads 80,000 bushels per hour.

PROBLEM

United Grain wanted to find a more accurate method of bin-level sensing to accelerate production. "We wanted to know when a bin is almost empty in order to re-fill it quickly," says Randy Rose, plant electrician at the Vancouver terminal. Under the old system, United Grain lacked an efficient method to track the filling and discharging of shipping bins, which caused production delays. When considering various technologies to monitor grain levels, United Grain soon realized that cable-based technologies were inappropriate because the bins tapered into a funnel shape. Since cable sensors couldn't be placed within the bin's tapered discharge stream, they couldn't provide the low-level monitoring that Rose wanted. He decided to test a variety of systems based on ultrasound technology.

APPLICATION

Two years ago, Rose began testing 4 Kistler-Morse Sonologic systems for the 118-foot bins at the Vancouver terminal, each holding about 3 million pounds of grain. So far, the results are encouraging. "We've tested ultrasound systems from six different companies," Rose says, "Only two of them have come close to my standards for repeatability and measuring accuracy within one percent." Rose added that Kistler-Morse's service technicians and engineers put the company ahead of the pack, because of how they worked with him to solve problems such as false echoes. "Whenever I called them, they really wanted to work with me," he says, "They really wanted to solve the problem."

BENEFIT

Now, when United Grain discharges its shipping bins, the Kistler-Morse systems "give a good, clean picture all the way down, within one percent accuracy," Rose says, "Now I can tell if the bin is empty within one minute after its emptied." And during the fill cycle, Kistler-Morse systems consistently plot bin levels once the bin is 70 percent full.

CONCLUSION

Rose gives this piece of advice to engineers and electricians searching for bin-level monitoring solutions at grain facilities: "Each person should try their (Kistler-Morse) Ultrasonics in their own application. Now, I'm not saying that they'll solve every single little problem you have -- but if their unit can't do it, then no unit can do it. Their equipment is as good as anything that's out there, and their service sets them apart."