Kistler-Morse®

Microcells

case history

Market: Agricultural Storage and Production

CUSTOMER

Rose Acre Farms chicken complex in Monon, IN. Headquartered in Seymour, IN, the firm is the 2nd-largest egg-producing company in the U.S., with eight complexes in Indiana and Iowa.

PROBLEM

In 1986, Rose Acre Farms was building a new egg-hatching complex in Monon, IN. The company wanted to install a highly-automated feeding system for 1.6 million chickens at the complex. In order to do so, Rose Acre needed an accurate, reliable and cost-effective solution for monitoring the weight of chicken feeds kept in 12 bins, each measuring 35-feet tall and holding 24 tons of feed. Rose Acre didn't want to use ultrasonic technology because of the various densities of feeds used at the site. "We have 30 different feed formulas for the bins," says Roger Grieger, Feed Mill Manager. "The younger birds get bean mill, which is higher in protein and is less dense. The older birds get need more calcium and lime, which is denser, so a full bin weighs more."

APPLICATION

Rose Acre decided to install Kistler-Morse Microcell sensors on each leg of the 3-legged carbon steel bins. Feed from the bins goes to the chicken houses via steel flex augurs, which dumps the feed onto a feeder chain to the chicken house. The chickens then eat off the conveyor-type feeder chain.

BENEFIT

"I'm here all by myself, and I'm able to make feed for 1.6 million chickens," Grieger says. "If the (Kistler-Morse) equipment wasn't here, I'd have to climb up on top of each bin to see how much is in them. It saves me lots of time. My office has digital readouts for all 12 bins, so I can see when the bins are almost empty and if feed needs to be cranked up." Grieger says that accuracy is important because the complex isn't manned on Sundays. "On Saturday, I need to know exactly how much is in each bin, so that I know when they're full. The chickens eat 14 to 15 tons per day. We don't want the feed to run out, otherwise their egg laying will slack off."

CONCLUSION

The Microcell units are installed in an unheated building, which is susceptible to below zero temperatures in the winter and 100+ Fahrenheit temperatures in the summer. Depending on the individual bins --which hold as much as 24 tons -- Grieger says the accuracy of the Microcells varies by 600 pounds at the most when the bins are full. "The accuracy is more than what we need," Grieger says, "But the main advantage is they're so reliable. We installed 36 units when the complex was built, and since then we've only had to replace four of them."

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