InnovaGel gains quick return on investment

Radar provides efficient and accurate level measurement

InnovaGel, a manufacturer of vitamins and supplements in the nutraceutical and OTC market, was in need of solution for its soft gelatin encapsulation machine application. The company did not have an efficient way to detect the level of gelatin in the tanks, resulting in the loss of material and production time between batches. Endress+Hauser was able to provide a level measurement solution that best fit InnovaGel’s application needs.

**Challenge**

InnovaGel was experiencing challenges with its soft gel encapsulation process. The machine operator would run a batch and was unable to determine the ideal time when to change the tank. The manufacturer did not have an effective process to detect the level of gelatin inside the tanks or a way to alert the operator of an impending low-level condition. The operator would wait for air to blow out of the lines as an indicator of when the tank was empty and would then change the tank.

The operator would manually change the tank which would typically add a 20 minute delay into the process. This changeover was needed up to three times a day, resulting in as much as an hour of lost production time every day, per machine.

**Development Process**

InnovaGel knew it needed a more efficient and cost-effective way to measure the level inside the tanks. The company could see they were losing precious material and production time and knew it needed a continuous measurement to streamline the process.

**Solution**

Endress+Hauser sales representatives were able to work with the engineering team at InnovaGel to find the best solution for the soft gel encapsulation machine. Endress+Hauser recommended the Micropilot FMR52. The FMR52 is used for continuous, non-contact level measurement of aggressive liquids, pastes and slurries in applications with hygienic requirements. The measurement is not affected by changing media, temperature fluctuations, gas blankets or vapors.
Solution Details
Being in the nutraceutical industry, InnovaGel needed an accurate, reliable and sanitary compact sensor design to achieve the minimum process interruption required during tank changeover. The company was familiar with the quality and integrity of Endress+Hauser instrumentation, as they have built a partnership with Endress+Hauser while using Liquiphant and Soliphant for level detection in other tank applications.

Endress+Hauser sales representatives recommended the Micropilot FMR52 for the application. The level sensor’s compatibility to interface with the existing peripheral instruments, which are displays with alarm function indicators, allowed for a seamless integration.

“The integrity of the design is critical for us. The FMR52 is a compact, user-friendly and self-contained device which works very well and is compliant with the standards of our industry,” said Chris Aemisegger, Director of Engineering, InnovaGel. “We eliminated the potential to add air into the process, resulting in efficient startup and changeover times. What used to interrupt the process 15-25 minutes now takes less than five minutes or causes no downtime at all,” Aemisegger added.

Endress+Hauser helped with the initial set up, including startup and programming. Sales representatives trained InnovaGel personnel on-site on how to use the FMR52 and its display options. Since each tank is identical, they were able to utilize the HistoROM copy function on the display to duplicate the parameter settings for the remaining six soft gel encapsulation machines.

“The Endress+Hauser how-to-videos made it simple to walk InnovaGel’s engineering team through the Micropilot configuration, and to demonstrate how easy it is to duplicate parameter settings from one unit to the next,” commented Jason Kurrle, TriNova’s South Florida Account Manager.

Results
InnovaGel made the decision to purchase FMR52s for each of the seven soft gel encapsulation machine lines and are pleased with the performance.

“There was a pressure to get the instrumentation implemented after we learned the potential ROI,” said Aemisegger. “With the installation of the FMR52s, we saved an hour a day of manufacturing changeover time on each line, resulting in an ROI of three months.”