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PRESS RELEASE

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Oakland Instrument gets Patent on Automatic Calibration Feature for Film Thickness Gauge

St. Paul, MN - Oakland Instrument Corp. has received a U.S. patent on its AutoCal™ Film Thickness Gauge, Oakland said March 13th.

The new feature provides for automatic- or self-calibrating film gauge profiling with their innovative capacitive-based film thickness gauge, by utilizing a contact sensor to calibrate the non-contact sensor, automatically.

According to Oakland Sales Manager Neil Sticha, a weakness with previous designs is that a capacitive sensor is a relative measurement device which needs to be calibrated, and also needs a homogenous (constant dielectric) material in both the machine and transverse-direction over the sample size being measured. Capacitance sensors offer (by far) the best thickness resolution of any measurement technology, and is typically considered the best choice for plastic film.

"We actually introduced this feature to solve a customer problem - nylon film is hygroscopic and moisture absorption in the film samples will change the dielectric and, therefore, stored calibrations are not effective with changing moisture levels. By introducing our patented model CX-1020 AutoCal™ Off-Line Film Thickness Gauge, we added a contact sensor alongside the capacitive sensor to address these issues."

"The contact sensor is not affected by dielectric variation and can be run as a profile device for multiple readings across the sample. The contact sensor can be set up to calibrate the capacitance sensor, automatically, or the contact sensor can be set up to run as an independent profiling sensor."

According to Mr. Sticha, the CX-1020 system marries the best traits of two technologies: capacitance for high resolution and continuous profiles; contact for absolute measurement that is not affected by material composition. "Our dual sensor approach provides the most flexible system available on the market. You can even run the same sample twice (once with each sensor) and overlay the results with our software for comparison analysis."

"Oakland Instrument is the leading technical innovator in the off-line thickness gauging marketplace. "Oakland was the first manufacturer to develop a WindowsTM-based software package for its capacitance profiling system, and we were issued a patent in October 1999 for an innovative reference sensor and improved film transport design which is more stable in an operating environment with changing temperature and humidity, and also allows the operator to run film samples at a variable range of speeds and distances between sensor readings."

"Our second patent on this product adds automatic calibration to this system. Since capacitance is an indirect thickness measurement technique where the dielectric of the material is measured and converted to a thickness value, its main disadvantage is that calibration is required for different product formulations, and the capacitive technique will not work on conductive materials (foil laminates, anti-stat films, etc.). By adding our AutoCalTM sensor, we have eliminated this limitation in capacitance-based gauging."

"As demonstrated by our two patents over the past three years, along with numerous other technical advances, Oakland is clearly at the forefront in this product segment."

Oakland Instrument is a St. Paul-based test instrument manufacturer for the plastic film and sheet industries. ***You can contact Neil Sticha at the above phone or fax, or at email@oaklandinstrument.com.***

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