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Metryx Launches Fully Automated Mass Metrology 300mm Tool

BRISTOL, UK – December 12, 2005 – Designed for monitoring critical semiconductor device manufacturing process steps on product wafers in a variety of applications, including memory, logic and power components, metrology specialists Metryx today unveiled the Mentor SF3, a 300mm mass metrology tool offering atomic layer measurement accuracy.

Capable of measuring to the nearest 10 micrograms (approximately one Angstrom of material thickness), the in-line Mentor SF3 tool monitors the mass of any wafer following a process step to quickly determine whether device manufacture process steps are operating consistently and in the expected manner. Through simple comparison with a reference wafer, the tool allows process changes to be reliably and accurately determined after deposition, wet or dry etch or CMP processing.

“The Mentor SF3 offers a unique and simple solution to problems that no other metrology equipment is able to solve,” explained Dr Adrian Kiermasz, President and CEO of Metryx. “By characterizing a wafer after every process step we are able to form a mass fingerprint. This finger print changes from process to process as materials are added or removed. By measuring the mass at the atomic level, we are able to identify any variations in this fingerprint from wafer to wafer. By using this non-interfering in-line approach, we believe we are able to identify a problem sooner than any other form of current metrology and therefore offer a tremendous cost saving both in terms of time and money.”

The small-footprint Mentor SF3 tool is capable of throughputs of 60 wafers per hour to enable nanotechnology mass measurement of product, test and blanket wafers independent of substrate size or material. The stand-alone Mentor SF3 features a single 300mm Front Opening Unified Pod (FOUP) located at 90 degrees to the right of the normal user interface. The system's robot is contained within a mini-environment and utilizes FOUP adaptors to meet 200-300mm bridge tool requirements. Pre-identification of the FOUP adaptors by the tool enables seamless handling.

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Additional Information:

Product: Mentor SF3

Product Focus: In 300mm production, there are many physical wafer parameters that engineers would like to monitor to ensure their production processes perform to specification. These could be step coverage in thin films to sidewall profiles in etch. A key point about mass metrology is that if any of these physical wafer parameters have even minor shifts, then this will bring about a mass change. Metryx is able to measure this change at the atomic level and provide trend monitoring or SPC solutions. It does this without any interference to the process or wafer. The Metryx Mentor SF3 tool is designed to monitor changes in process performance and quickly determine whether device manufacture process steps are operating correctly. The innovative nanotechnology weight measurement system allows process changes to be reliably and accurately determined after deposition, wet or dry etch or CMP processing.

Applications: Mass measurement of product, test and blanket wafers independent of substrate size or material.

Availability: Now available. For more information please visit <http://www.metryx.net/products.html>

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About Metryx

Metryx is a semiconductor equipment manufacturer specializing in unique nanotechnology mass measurement techniques. Based in Bristol, England, Metryx's non-destructive 200mm and 300mm metrology tools offer atomic layer accuracy making them ideal for material characterization and device manufacture process control. For more information on the company and its products please visit www.metryx.net