Applied Materials Delivers Advanced Copper Technology for FPD Manufacturing on AKT-PiVot PVD System

October 28, 2009

YOKOHAMA, Japan, Oct 27, 2009 (BUSINESS WIRE) -- Applied Materials, Inc. today announced that it has expanded its breakthrough AKT- PiVot(TM) 55KV PVD* system to include advanced copper deposition processing for manufacturing TFT-LCD* flat panel displays (FPD). Using the PiVot system, FPD manufacturers can transition from aluminum to copper bus lines to achieve faster pixel response and lower power consumption in next-generation LCD-TV panels. The PiVot system delivers benchmark, cost-efficient copper deposition performance by combining high deposition rates, efficient target utilization and long maintenance intervals with enhanced film morphology.

Key to the PiVot system's superior film quality is its proprietary rotary cathode design that employs unique deposition modulation technology to deposit copper layers with uniform grain distribution, low resistivity and high thickness uniformity. The PiVot system also enables greater than 80% target utilization to provide significant savings in expensive target material.

"By providing unmatched film properties and efficient raw material utilization, our AKT-PiVot system answers the critical needs of today's LCD TV market that is driven by demand for larger and ultra-high definition panels and requires innovations in deposition technology to deliver high-quality films at a low cost-of-ownership," said Dr. Mark Pinto, senior vice president and general manager of Applied's Display, and Energy and Environmental Solutions groups. "The system's proven productivity and proprietary copper process technology create a powerful addition to our strong portfolio of FPD solutions."

The PiVot system's modular architecture enables a large variety of configurations to maximize production efficiency, eliminating the bottlenecks caused by different process times in different modules in a traditional in-line machine. The PiVot system's cluster-like arrangement also allows continuous operation during individual module maintenance. Combined with long maintenance intervals and extended target life, PiVot system provides the highest availability and longest continuous production time in the industry.

The AKT-PiVot 55KV PVD system's superior copper deposition technology will be showcased at Applied Materials' booth at FPD International and Green Device 2009 in Yokohama, Japan, on October 28-30 as part of Applied's portfolio of advanced FPD manufacturing solutions. These solutions include PECVD*, PVD for TFT-array and color filter, electron beam array test technologies, factory automation and service. In addition, Applied Materials will display its green device manufacturing technologies, including solar, low-e glass coating and roll-to-roll deposition for flexible PV* and display.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in Nanomanufacturing Technology(TM) solutions with a broad portfolio of innovative equipment, service and software products for the fabrication of semiconductor chips, flat panel displays, solar photovoltaic cells, flexible electronics and energy

efficient glass. At Applied Materials, we apply Nanomanufacturing Technology to improve the way people live. Learn more at www.appliedmaterials.com.

* *TFT-LCD = thin film transistor liquid crystal display; PVD = physical vapor deposition; PECVD = plasma-enhanced chemical vapor deposition; PV = photovoltaic*

Photos/Multimedia Gallery Available: http://www.businesswire.com/cgi-bin/mmg.cgi?eid=6084892&lang=en

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