SEMICON Taiwan 2008: Equipment makers pay more attention to new materials and through-silicon via

Claire Sung, Taipei; Esther Lam, DIGITIMES [Thursday 11 September 2008]

Semiconductor equipment makers are not being discouraged by the present industry downturn. Material supplier Rohm & Haas Electronic Materials and equipment vendor KLA-Tencor have both grown their attention to new materials and through-silicon via (TSV) technology.

James T Fahey, president of Rohm & Haas, stressed that industry players should devote more resources for R&D during the industry downturn. Currently many customers have introduced TSV and low-k materials on 32/22nm processes, he said. He also added that its partnership with Taiwan Semiconductor Manufacturing Company (TSMC) has been extended beyond 22nm.

With a technology center already located in Hsinchu, Taiwan, Rohm & Haas Taiwan president, Jia-Ping Chen, said the company will continue expanding capacity for chemical mechanical planarization (CMP) pads. The center will have a total of three phases of construction with the third phase expected to complete during year-end 2008. Total CMP pad capacity will grow to 10,000 units after the construction, he updated.

KLA-Tencor indicated that semiconductor makers started deploying new materials such as high-k/metal gate when migrating process nodes to 45nm and 32nm. As an inspection and metrology tool supplier, a minimum of four different tools will be required to ensure a proven yield rate, meaning demand for corresponding inspection and metrology tools will be promising.

KLA-Tencor has identified TSV as a market segment that should derive business potential. A recent acquisition of Belgium-based company ICOS Vision Systems has granted KLA-Tencor core technologies on TSV. Company executives noted that ICOS' WI2300/3300 solutions are specialized for TSV.

Related stories:
Economic and technology challenges moving to 32nm: Q&A with ATMI (Sep 11)
Semi equipment spending worse than expected, to fall 22% in 2008, says Gartner (Jul 11)
Global silicon wafer revenues totaled US$12.5 billion in 2007, says Gartner (Jun 12)
A "Renaissance" in IC testing and packaging: Q&A with ASE R&D chief officer Ho-Ming Tong (Apr 24)