



UMC Selects Applied Materials' Single-Wafer Front-End Process Technology for Advanced Chip Manufacturing

December 4, 2000

SANTA CLARA, Calif.--(BUSINESS WIRE)--Dec. 4, 2000--

Major Semiconductor Foundry Replacing Furnace Steps with

Gate Stack Centura(R) to Build 0.15 Micron Transistors and

Provide Extensibility to 300mm Wafers

Applied Materials, Inc. announced today that United Microelectronics Corp. (UMC) of Taiwan has selected Applied Materials' Gate Stack Centura(R) single-wafer front-end process technology for

- 0.15 micron logic chip production and the development of its next-generation 0.13 micron and beyond devices. UMC's decision culminates a two-year joint development program with Applied Materials in which both the technical and time-to-market advantages of single-wafer processing were thoroughly evaluated.

"Applied Materials' single-wafer solution will provide us with process technology advantages such as integrated gate dielectric and electrode formation, and superior process uniformity and controllability," said Mr. I.J. Wu, Vice President of UMC's Fab 8C. "Our customers rely on us to provide them with reduced time-to-market solutions. Adoption of Applied Materials' single-wafer product suite enables us to quickly deliver prototypes and products to customers while reducing our inventory and increasing fab flexibility. We expect single-wafer technology to provide us with even greater advantages when we move to 300mm manufacturing."

Applied Materials' single-wafer front-end process technologies are integrated on the Gate Stack Centura system which includes the company's proprietary RTP ISSG (in situ steam generation) oxidation and PolyGen(TM) polysilicon deposition chambers for forming gate dielectrics, gate electrodes, and shallow trench isolation applications. In addition to providing economic efficiencies, the integration of these chambers on a single platform allows improved device reliability by limiting the wafer's exposure to atmosphere.

"Single-wafer technology enables fabless chip companies working with foundries to accelerate the introduction of new designs for next-generation consumer electronics into the marketplace," said Dr. Paul Meissner, General Manager of Applied Materials' Thermal Systems and Modules Division. "We expect the adoption of single-wafer front-end processes to accelerate further as the industry focuses on providing technical superiority and reducing time-to-market."

Applied Materials (NASDAQ:AMAT) is a leader of the Information Age and the world's largest supplier of products and services to the global semiconductor industry. Applied Materials' web site is <http://www.appliedmaterials.com>.

--30--cs/sf*

CONTACT: Applied Materials

Betty Newboe, 408/563-0647 (editorial/media)

or

Carolyn Schwartz, 408/748-5227 (financial community)