



## Applied Materials Continues to Advance MERIE Technology with New Dielectric Etch System

July 12, 1999

Business Editors/High-Tech Writers

SANTA CLARA, Calif.--(BUSINESS WIRE)--July 12, 1999--

Dielectric Etch Super e(TM) Centura(R) Addresses Wide Range of Oxide Etch Applications, Delivering High Productivity and Leading-Edge Performance for Sub-0.18 Micron Devices

Applied Materials, Inc., the leading supplier of plasma etch systems to the semiconductor industry, announces the Dielectric Etch Super e Centura. The Super e system, which is an extension of Applied Materials' market-leading MxP+ technology, provides customers with unmatched productivity and the leading-edge process performance required for a wide range of dielectric etch applications. High customer demand in North America, Korea, Taiwan and Europe has resulted in orders for more than 75 Super e chambers, predominantly for etching advanced via structures.

"The Super e chamber offers the latest advancements to our successful series of dielectric etch MERIE (magnetically enhanced reactive ion etch) systems," said Dr. Diana Ma, general manager of the Dielectric Etch Division at Applied Materials. "Inherent in the Super e design are productivity and technology enhancements that have enabled our customers to realize up to a 30 percent reduction in cost of ownership and up to 50 percent improvement in throughput over the previous system. Critical dimension uniformity performance is also greatly improved, providing extendibility to sub-0.18 micron dielectric etch applications."

Super e features a new high-power RF system for higher etch rates and enhanced wafer handling to produce throughputs of up to 110 wafers per hour. These enhancements ensure maximum output with a minimum number of systems, enabling customers to significantly reduce their manufacturing costs. Critical dimension (CD) uniformity, which is key to consistent device performance, has been substantially enhanced by a new ceramic electrostatic chuck, achieving less than +/- 10nm bias variation for 0.18 micron devices.

The Super e addresses a wide range of dielectric applications including advanced metal vias, contact etch, mask open, pad and spacer etch. The Dielectric Etch Super e Centura, combined with Applied Materials' Dielectric Etch IPS(TM) product, provide Total Solutions(TM) for all current and emerging dielectric etch applications.

The Super e chamber is available on the Centura and Etch Centura II platforms; upgrades are also available for Applied Materials' large installed base of more than 1400 Dielectric Etch MxP+ chambers.

According to market researcher Dataquest, the market for dielectric plasma etch systems totaled \$827 million in 1998, with growth projected to \$1,923 million by 2004, for an estimated compound annual growth rate (1998-2004) of 15.1 percent.

Applied Materials, Inc. is a Fortune 500 global growth company and the world's largest supplier of wafer fabrication systems and services to the global semiconductor industry. Applied Materials is traded on the Nasdaq National Market System under the symbol "AMAT." Applied Materials' web site is <http://www.appliedmaterials.com>.

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KEYWORD: CALIFORNIA

INDUSTRY KEYWORD: COMPUTERS/ELECTRONICS COMED PRODUCT