Semicon West '83

QUALITY STARTS HERE.

Applied Materials

Applied Materials is a leading producer of semiconductor manufacturing systems. We're an international company with facilities throughout the United States, Europe, and Japan. Our customers include every major semiconductor manufacturer in the free world.

The reason is quality. The increasing complexity of semiconductor devices literally brings new dimensions to the concept of quality. Films must be precisely deposited and precisely etched. The quality of the finished semiconductor is only as good as the quality of the equipment used to fabricate it.

Epitaxial chemical vapor deposition, dry plasma etch, plasma deposition, high pressure oxidation, continuous silicon dioxide... At Applied Materials we build superior quality

Applied Materials AME 8100 Series Plasma Etch System etched the symbolic word "QUALITY" into the plasma oxide layer of a semiconductor chip with VLSI precision not possible before. Scanning Electron Microscope (SEM) photograph is 1,400 times actual size. The etch is approximately two microns deep with line-widths as narrow as one micron or 1/25,000th of an inch.

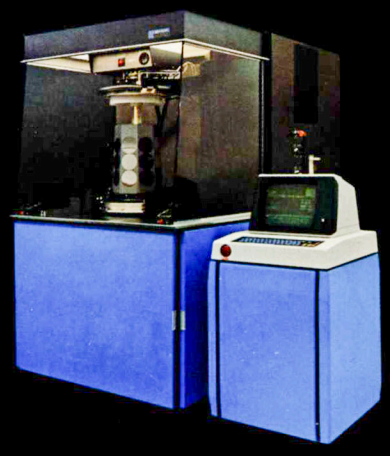
AME 8100 SERIES PLASMA ETCH SYSTEMS

Applied Materials plasma etch systems, with their incredible accuracy, have removed the last barrier to volume production of VLSI devices.

The AME 8100 Series Ion-Assisted Plasma Etch Systems includes the AME 8110 for dielectrics such as oxides, nitrides, and organic materials; the AME 8120 for polysilicon; and the AME 8130 for aluminum and aluminum alloys.

These microprocessor-controlled plasma etch systems incorporate a unique cylindrical process chamber and advanced process technology to etch fine line semiconductor device structures with superior profile control and excellent selectivity in high volume production.

Outstanding process performance, high throughput, and unrivaled uptime are among the many reasons the AME 8100 Series is recognized as the industry's standard.



AMC 7810 AND 7820 RADIANTLY HEATED EPITAXIAL REACTOR SYSTEMS

Manufactured by the company that pioneered radiantly heated epitaxy, the microprocessor-controlled AMC 7810 and AMC 7820 Systems provide the highest quality epitaxial films available today.

Unsurpassed yields, superior wafer throughput and high equipment reliability are your assurance of quality whether you choose the AMC 7810 operating at reduced or atmospheric pressures; or the AMC 7820 designed for processing at atmospheric pressure alone.

systems and develop exceptional processes. And every one of our systems and processes is the product of a partnership with our customers. As our customer you become a vital part of our top research and development, applications and engineering teams.

The result is superior quality products: both yours and ours, today and tomorrow. But our joint venture doesn't stop there. We continue to back you with the finest, most comprehensive support organization in the business. You get superior documentation, parts depots throughout the world, and the most professional field service and technical support people anywhere and anytime.

We're Applied Materials. Quality starts here. And never quits.

AMP 3300 PLASMA DEPOSITION SYSTEMS

Superior film qualities, both nitride and oxide, guaranteed uniformities, and proven reliability have made the AMP 3300 popular for a wide range of plasma passivation and interlayer applications.

Recent process developments have led to an improved method of gas distribution employing a perforated electrode. This provides for uniform gas composition across the entire wafer platen, resulting in consistent film characteristics on every wafer.

AMS 2100 CONTINUOUS SILOX® SYSTEMS

When oxide layers are needed, quality starts with the AMS 2100, a self-contained CVD system for volume production of SiO_2, PSG or BPSG films. Continuous processing provides high throughput rates; the optimum deposition rate of 1,100 Å/minute provides low-stress films with guaranteed uniformities. More than 250 systems are now in use for applications such as passivation and interlayer dielectrics.

HiPOx® HIGH PRESSURE OXIDATION SYSTEMS

This unique high pressure, low temperature system produces high yield, low defect, thermal oxide films with guaranteed uniformities and superior wafer throughput. Each run will process up to 250 3-inch, 100mm or 125mm wafers using either steam or dry oxidation processes. Applied Materials markets the system, manufactured by GaSonics, with a guarantee that it will produce uniform, repeatable films of ±5 percent or better for within-a-wafer, wafer-to-wafer or run-to-run.

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