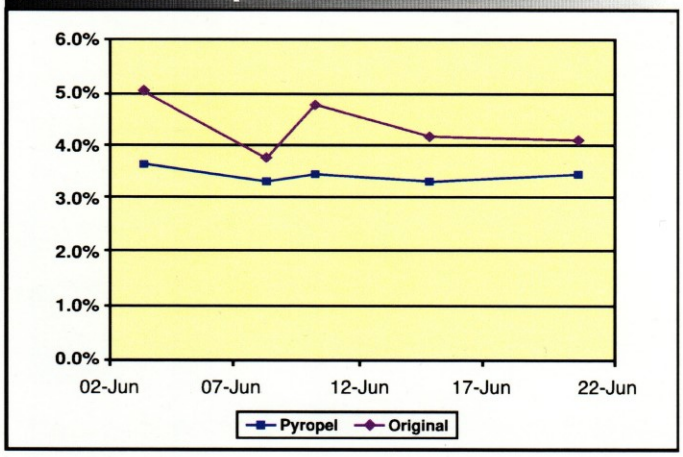
PYROPEL Case Study

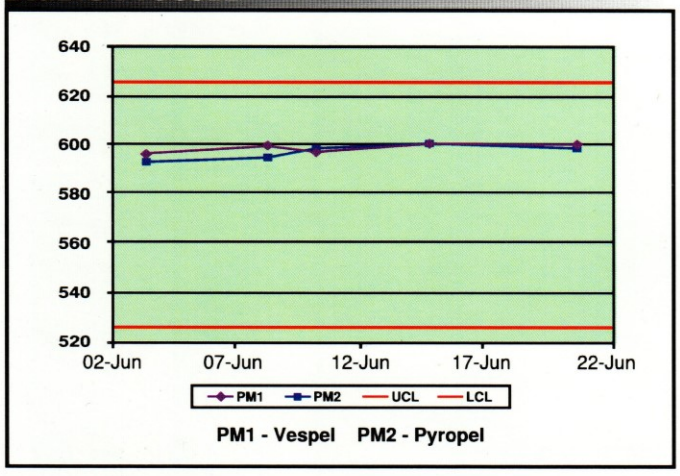
Superior Etch Uniformity in LAM Oxide Chamber

Non Uniformity vs. Time



Greater etch uniformity across the wafer ensures repeatability of critical dimensions.

Stable Process



Without making any changes to the existing process the Pyropel confinement ring was easily interchanged.

"Vespel" is a registered trademark of E.I. DuPont Company

European Chip Manufacturer

Customer: A global European based semiconductor manufacturer qualified Pyropel in a LAM Rainbow oxide etch chamber. The Pyropel confinement ring proved more reliable and had superior etch uniformity compared to the existing component made from DuPont's Vespel® SP-1 polyimide.

The European Fab is a leader in voice and video products.

Equipment Type: 8" wafers, LAM Rainbow 4520 oxide etch

Customer Challenge: Applied Ceramics AG, an exclusive distributor of Pyropel in Europe, worked closely with the customer to change from Vespel to Pyropel with the objective of maintaining current process conditions.

Process Conditions

- Chemistry - CF_4, CHF_3
- RF Power - 750 – 1500 Watts
- Etch Rate - 350 – 750 nm/minute

Customer Benefits

- *Greater etch uniformity*
- *Stable process conditions*
- *Lasts longer*
- *Costs less*

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