ANALYZE●

Full Trace Chamber Matching Optimizes Fleet Performance by Guarding Against Excursions That Impact Wafer Quality

For semiconductor wafer manufacturers, optimizing wafer chamber performance is critical to ensuring high quality, high yield wafers. For customers to achieve this goal and maximize the performance of their fleet, analyzing variations in chamber performance and quickly recognizing which parameters are drifting over time is the key to assuring the maximum yield from each chamber.

Chamber Matching Analysis Goes from Hours to Minutes with BISTel CM

BISTel's Chamber Matching (CM) solution can intelligently and automatically determine the best pertime between process steps to provide engineers another perspective in their chamber analyses. With trace-level insights on both parameter value and process time, the CM solution offers the most comprehensive analysis of chamber performance available in the market today.

Intelligent Manufacturing

BISTel's intelligent manufacturing solutions are shaping the factory of the future, improving costs, operational efficiencies, and quality across factories by connecting the manufacturing ecosystem to better detect, analyze, predict, and adapt real-time to changing manufacturing conditions. BISTel solutions collect, manage, and analyze data, monitor the health of machines and equipment, optimize process flows, and identify root cause failures to mitigate risk in manufacturing. The release of BISTel's intelligent manufacturing solution includes advanced machine learning, industry leading analytics, predictive, and continuous improvement applications that accelerate the road to smart manufacturing.

Markets Served

Semiconductor Manufacturing
Semiconductor Equipment Manufacturers
Flat Panel Display Manufacturing
LED Manufacturing
PCB/SMT

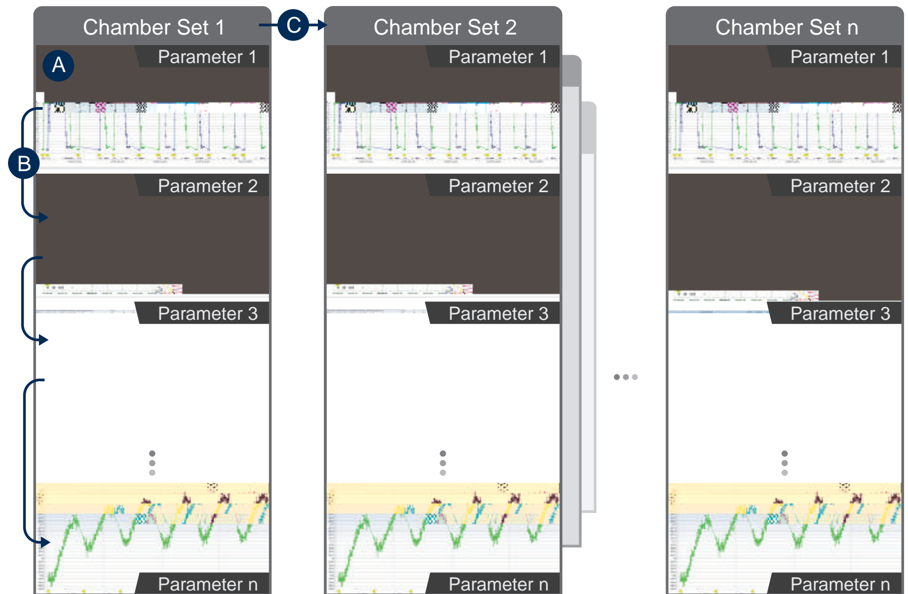
Key Benefits & Features

- Statistical analysis quickly identifies best performing “Golden Chamber”
- Runs full trace analysis on all sensors, and rank chambers and parameters worse to best
- Identifies chamber process time and wait time variations to provide additional performance insight
- Compares an unlimited number of chambers simultaneously
- Completely FDC system independent
- Chamber analysis scheduling automatically generates routine equipment performance reports

Current "Eyeball" Test Approach vs Chamber Matching(CM)

Traditional Approach

A. Load traces of the first parameter from the two chambers to be compared into charts (or overlay them on the same chart) and “eyeball” for differences
B. Move to the next parameter and repeat the process until the last parameter
C. Move to the next set of chambers and repeat the process (A & B) for each chamber to be compared



BISTel CM Solution

1. Load ALL parameters from ALL interested chambers
2. Select chamber reference option
3. Run analysis - Results in minutes