



Pivotal's Sensor X™ Improves Aviza's ALD Equipment Cost of Ownership

SENSOR X ABILITY TO EXCITE TITANIUM IN DRY CLEAN PROCESSES ALLOWS FOR DRAMATIC IMPROVEMENT IN TOOL PRODUCTIVITY

Pleasanton, CA.—May 12, 2009—Pivotal Systems Corporation, the leader in advanced process monitoring and control solutions, today announced that it has been able to dramatically improve Aviza's ALD equipment cost of ownership through the use of an in situ dry clean coupled with Sensor X's end point technology. "For HKMG applications, the titanium deposition process is a very costly, low throughput step due to the high frequency of wet cleans that need to be performed. Implementing an in situ dry clean is the obvious solution, but being able to end point the dry clean is critical since a hardened titanium oxide layer can dramatically change the time required to clean the chamber," said Chuck Borowski, Pivotal's Director of Product Marketing, "With Sensor X, we have the only real time gas analysis sensor on the market that can excite metals like titanium during an in situ dry clean. As such, we see clearly and accurately when the dry clean's end point has been achieved."

As a result, Aviza's ALD equipment productivity performance has been increased significantly. "The high dry clean etch rate, in situ measurement capability of Sensor X, and short process conditioning time enabled an 80% reduction in consumable parts costs and an estimated 10X increase in MTBC [mean time between wet cleans]," said Andy Bavin, Product Manager at Aviza Technology. A joint article was published between Aviza and Pivotal and will be published soon through Solid State Technology.

About Pivotal Systems

Pivotal Systems Corporation provides best-in-class monitoring and process control technology for the semiconductor manufacturing industry. Pivotal's vision is to enable an order of magnitude increase in fab productivity and capital efficiency for current and future technology nodes. This vision is achieved through its real time in situ process monitoring and control solutions. Founded in 2003 and based in Pleasanton, California, the company is led by veterans from the semiconductor and high-tech industries. For more information about Pivotal, please visit www.pivotalsys.com, or send an email to info@pivotalsys.com.

About Aviza Technology

Aviza Technology, Inc. designs, manufactures, sells and supports advanced semiconductor capital equipment and process technologies for the global semiconductor industry and related markets. Their systems are used in a variety of segments of the semiconductor market, such as advanced silicon for memory devices, advanced 3-D packaging and power integrated circuits for communications. They focus efforts on designing systems that enable device manufacturers to meet today's challenging technology and manufacturing requirements. Aviza offers both front-end-of-line and back-end-of-line systems and process technologies used for the aforementioned markets addressing critical thin film formation technologies, including atomic layer deposition (ALD), physical vapor deposition (PVD), plasma enhanced chemical vapor deposition (PECVD), plasma etch and thermal processing systems.