



Quantum Global Technologies, LLC Press Release

Quantum Global Technologies joins SEMATECH to Advance Process Tool Chamber Parts Cleanliness to Meet sub-20nm Wafer Fabrication Process Requirements

QuantumClean® is the First Semiconductor Industry Outsourced Process Tool Parts Cleaner to Join SEMATECH

Quakertown, Pennsylvania, USA. April 29, 2014 – Quantum Global Technologies LLC, parent company to **QuantumClean®**, the leading global provider of validated high-purity outsourced process tool parts cleaning, surface treatment, refurbishment, analytical and engineering services to the semiconductor, solar and LED industries, and **ChemTrace®**, an industry-recognized leading microcontamination analytical testing laboratory, today announced it joined SEMATECH in Albany NY, to advance process tool chamber parts cleanliness and analytical methods to meet sub-20nm wafer fabrication process requirements.

Under the terms of the agreement, SEMATECH and QuantumClean will collaborate in the development of new methodologies involving process tool chamber parts cleaning and analytical methods for detecting particles beyond today's capabilities.

"We are extremely pleased to enter into this agreement with SEMATECH", stated Dr. Ardeshir Sidhwa, QuantumClean's Sr. Director of Innovation & Technology. "We constantly strive to advance technologies and provide innovative solutions to our leading-edge wafer fab and OEM customers. As our industry advances towards sub-10nm nodes, QuantumClean will be prepared for the challenges of surface preparation and cleanliness, removing and measuring particles and contamination well-beyond today's capabilities," concluded Dr. Sidhwa.

"QuantumClean is the first and only outsourced semiconductor process tool parts cleaner that has the vision to join SEMATECH," stated David Zuck, COO of Quantum Global Technologies. "QuantumClean has always invested a significant portion of its profits into parts cleaning and analytical technology development to meet the ever-increasing requirements of the industry's leading-edge wafer fabs and OEMs. However, in sub-20nm design node manufacturing, traditional part clean methods and related metrology prove ineffective. Through collaboration with SEMATECH, which is already working on 11nm and 7nm design node solutions, these challenges will be overcome and QuantumClean will incorporate this knowhow into our business to the benefit of our customers," concluded Mr. Zuck.

"SEMATECH's goal is to build the infrastructure needed to successfully implement future device nodes. Our work to investigate the generation, propagation, removal, and impact of defects generated by equipment, equipment components, and materials used in advanced semiconductor processes helps enable these supply chain elements to meet the difficult contamination requirements of the upcoming device nodes," said Michael Lercel, SEMATECH's senior director of Technology. "Our partnership with QuantumClean brings additional expertise in precision parts cleaning to SEMATECH, and in turn will raise the level of our research efforts and further strengthen SEMATECH's commitment in identifying the challenges of future technology nodes."



About Quantum Global Technologies, LLC

QuantumClean[®] and **ChemTrace**[®] are divisions of Quantum Global Technologies LLC, which is headquartered in suburban Philadelphia, PA, USA.

QuantumClean[®] is the global provider in high-purity outsourced process tool parts cleaning and restoration services, tool part life extension and process tool part optimization solutions to the semiconductor wafer fabrication, OEM & OPM industries. Founded in 2000, QuantumClean operates technologically innovative *Advanced Technology Cleaning Centers*[®] built on the premise of providing customers *process improvement through consistently cleaner parts*[®] that exceed industry standards, dramatically reducing our customers' total cost of ownership. With eighteen *Advanced Technology Cleaning Centers*[®] located in nine countries, QuantumClean provides unsurpassed cleaning capability and convenience worldwide.

ChemTrace[®] is a recognized leading reference analytical testing laboratory primarily serving the semiconductor, solar and related industries by providing answers and solutions to its customers' micro-contamination related issues. Founded in 1993, **ChemTrace**[®] also provides independent analytical verification of process tool part cleaning effectiveness for many of **QuantumClean's** leading-edge semiconductor fab, OEM and OPM customers which have critical cleaning requirements.

For more about QuantumClean[®] and ChemTrace[®], visit their websites at www.quantumclean.com and www.chemtrace.com.

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About Sematech

For over 25 years, SEMATECH[®], the international consortium of leading semiconductor device, equipment, and materials manufacturers, has set global direction, enabled flexible collaboration, and bridged strategic R&D to manufacturing. Through our unwavering commitment to foster collaboration across the nanoelectronics industry, we help our members and partners address critical industry transitions, drive technical consensus, pull research into the industry mainstream, improve manufacturing productivity, and reduce risk and time to market. Information about SEMATECH can be found at <http://www.sematech.org>.