SET Receives Strategic Wafer Level Packaging Equipment Order from SEMATECH at UAlbany NanoCollege

SEMATECH Will Perform Innovative 3D Applications at CNSE’s Albany NanoTech with SET’s High Accuracy FC300 System

ALBANY, NY and SAINT JEOIRE, France – Sept. 1 – SET, Smart Equipment Technology, a wholly owned subsidiary of Replisaurus Technologies, has received an order for its high accuracy and high force Device Bonder FC300 from SEMATECH, the global consortium of semiconductor manufacturers. The order was booked earlier this year and the delivery of the machine is scheduled for the end of 2009 at SEMATECH’s 3D R&D Center at the College of Nanoscale Science and Engineering’s (CNSE) Albany NanoTech Complex in Albany, N.Y.

“Our comprehensive program is aimed at enabling the manufacturability of 3D interconnects, and will benefit from this versatile platform that addresses the broad spectrum of our member companies’ bonding requirements,” said Sitaram Arkalgud, SEMATECH’s 3D program director.

“As the SEMATECH-CNSE partnership continues to drive innovative solutions for next-generation nanodevice manufacturing, the addition of SET’s bonding system will support that effort,” added Richard Brilla, CNSE vice president for Strategy, Alliances and Consortia. “At the same time, the enhanced capabilities at CNSE’s world-class Albany NanoTech Complex will further enable the leading-edge research and development that is critical to our global corporate partners.”

The FC300 is a new generation of high accuracy (0.5 µm), high force (4,000N) device bonder for wafers diameters up to 300 mm. It can be equipped with an optional built-in chamber for collective reflow in a gas or vacuum environment. The FC300 also features nanoimprinting capabilities.

In the frame of its 3D integration program, SEMATECH will explore three-dimensional technology and design for applications in various domains. The technology research using the FC300 focuses mainly on die-to-wafer bonding applications. Other processes such as die-to-die bonding will be explored in the future.

The system ordered encompasses an ultrasonic bonding head and a high force bonding head equipped with a confinement chamber that reduces oxide on bumps and bonding pads. This configuration is especially interesting for Cu-Cu bonding applicable to 3D-ICs integration.

The FC300 has unrivalled versatility, and is able to perform various applications on the same platform with a quick process head reconfiguration:
- High Force Bonding Head, adapted to the thermo-compression bonding process.
- Low Force Bonding Head, for reflow bonding of all sorts of components, including RF & Optoelectronics device assembly.
- UV-curing Head for adhesive bonding using the UV-NIL process, etc.

“SET is proud of confirming its leadership position within the industry by providing cutting-edge bonding solutions to major players like SEMATECH. By working closely with our customers, SET has raised process development and flexibility of its equipment to the highest level,” said Gilbert Lecarpentier, SET business development manager.
About SEMATECH
For over 20 years, SEMATECH® (www.sematech.org) has set global direction, enabled flexible collaboration, and bridged strategic R&D to manufacturing. Today, we continue accelerating the next technology revolution with our nanoelectronics and emerging technology partners.

About CNSE
The Ualbany CNSE is the first college in the world dedicated to education, research, development, and deployment in the emerging disciplines of nanoscience, nanoengineering, nanobioscience, and nanoeconomics. CNSE's Albany NanoTech Complex is the most advanced research enterprise of its kind at any university in the world. With over $5 billion in high-tech investments, the 800,000-square-foot complex attracts corporate partners from around the world and offers students a one-of-a-kind academic experience. The Ualbany NanoCollege houses the only fully-integrated, 300mm wafer, computer chip pilot prototyping and demonstration line within 80,000 square feet of Class 1 capable cleanrooms. More than 2,500 scientists, researchers, engineers, students, and faculty work on site at CNSE’s Albany NanoTech, from companies including IBM, AMD, GlobalFoundries, SEMATECH, Toshiba, Applied Materials, Tokyo Electron, ASML, Vistec Lithography and Atotech. For more information, visit www.cnse.albany.edu.

About SET
SET, Smart Equipment Technology is a world leading supplier of High Accuracy Die-to-Die, Die-to-Wafer Bonding and Nanoimprint Lithography solutions. With more than 300 Device Bonders installed worldwide, SET is globally renowned for the unsurpassed placement accuracy and the high flexibility of its Flip Chip bonders. From the KADETT semi-automated R&D Device Bonder, through the automated FC150 and FC300 to the production FC250, SET offers a continuous process path from research to production. SET bonders cover most bonding technologies and offer the unique ability to handle and bond both fragile and small components onto substrates up to 300 mm. Further information on the FC300 is available on www.set-sas.fr.

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