Technical Strengths for the Semiconductor Industry

The Shin-Etsu Group is a global leader in developing sophisticated technologies for the semiconductor industry. Throughout the semiconductor production process, Shin-Etsu technologies support greater integration and production efficiency.

**Technical Strengths for the Semiconductor Industry**

**Silica and Silicon Metal**
Simcoa Operations Pty. Ltd. of Australia has a long-standing silica mining business. Shin-Etsu has established its own technology for single crystals and high-flatness processing technology for silicon wafers, gaining strong customer trust for its commercial production capabilities and quality technologies.

**300mm Silicon Wafers**
Shin-Etsu was the first to mass produce 300mm silicon wafers in 2001. Shin-Etsu Handotai Co., Ltd., established defect-free technology for single crystals and high-flatness processing technology for silicon wafers, gaining strong customer trust for its commercial production capabilities and quality technologies.

**Silicon Carbide Products**
Simcoa Electric Refining Co., Ltd., greatly contributes to improving precise processing of silicon wafers through their use as sawing materials and abrasives.

**Silicon Metal**
Shin-Etsu developed the first photoresist for use with the short wavelength excimer laser in 1999, and has become the leading manufacturer in this field. Shin-Etsu has also begun to sell lower-melt materials used in post-32nm generation refined processes.

**Epoxy Molding Compounds**
Shin-Etsu’s epoxy molding compounds provide excellent reliability and mouldability due to the utilization of Shin-Etsu’s own silicone low-stress technology, special filler technology and unique flame retardation technology, or “green compound technique.”

**Pellicles**
Shin-Etsu supplies high-quality pellicles for ArF and KrF excimer laser lithography. These products have high light resistance and good transmission uniformity. In addition, Shin-Etsu has succeeded in the development of super-large-size pellicles for the production of liquid crystal display (LCD) panels.

**Wafer Containers**
Group company Shin-Etsu Polymer Co., Ltd., has an excellent track record in front opening shipping boxes (FOSB) and front opening unified boxes (FOUP).

**Photomask Blanks**
Photomask blanks are photomask materials used for etching circuit patterns on silicon wafers. In fiscal 2009, Shin-Etsu began commercial production of cutting-edge photomask blanks, which are indispensable to the refining of semiconductors.

**Various products developed by Shin-Etsu**
are indispensable to semiconductor materials and their production processes.

**Photoresists**
Shin-Etsu offers a wide range of photomask products, including high-performance pellicles, photoresists, and wafer containers, which are indispensable to the refining of semiconductors.

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