NEWS RELEASE

SCREEN
DAINIPPON SCREEN MFG. CO., LTD.

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Successful development of wafer cleaning technology for next-generation semiconductor manufacturing

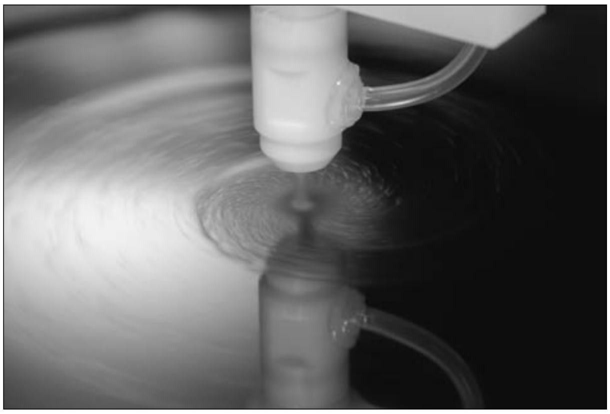
Physical cleaning with extremely fine particles extends the range of devices that can be processed

The Semiconductor Equipment Company (President: Takashige Suetake) of Dainippon Screen Mfg. Co., Ltd. (Headquarters: Kyoto, Japan) recently developed a unique new technology called Nanospray2 that makes the cleaning of 45-nanometer generation extremely fine pattern wafers possible.

In the semiconductor industry, where circuitry continues to get smaller and smaller, there is a pressing need for process technology that can be used not only with 65-nanometer line width patterns (a nanometer is one billionth of a meter), but also with next generation devices that will feature line widths as small as 45 nanometers. In addition, there is demand for technology that can clean a variety of materials, as well as ever-finer circuitry.

Nanospray2, a new cleaning technology that can be added to single wafer cleaning equipment and is indispensable for 45-nanometer generation wafer processing, is an improved version of Nanospray, a cleaning technology for 65-nanometer generation wafers that has gained both an excellent reputation and a significant market share since its release in 2003. Fine-grained chemicals are sprayed onto the wafer surface under optimal conditions to enable something that has proved quite difficult in the past: the cleaning of extremely fine-patterned devices with a minimum of damage. This technology will contribute greatly to increased yields for next-generation semiconductor devices. Since it can be used with a variety of cleaning methods, it is flexible enough to be incorporated into any manufacturer’s unique processing line. What’s more, with Nanospray2, the consumption of gases used in cleaning — such as nitrogen — is reduced to about half of what has traditionally been required. This both decreases running costs and makes the technology more environmentally-friendly.

SCREEN has already completed actual production tests with Nanospray2 incorporated into manufacturing equipment, and the technology has gotten great reviews from all involved. From now on, Nanospray2 will be installed in all of SCREEN’s single wafer cleaning units. SCREEN is confident that the Nanospray2 technology will support the company in its role as an industry leader in wafer cleaning equipment, and help expand its market share.



Nanospray2
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