

OXYMAT contributes to US silicon wafer development

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SMI installation of N100 and O60 for their R&D project.

As manufacturer of PSA gas generators for a wide variety of industries for nearly 40 years, OXYMAT has recently delivered both oxygen and nitrogen generators, to US HQ-based Silicon Materials, Inc. whose high-quality electronic grade silicon wafers are used in the semiconductor industry worldwide.

With offices located in two continents, Silicon Materials, Inc. (SMI) produce semiconductor grade silicon wafers in diameters from 200mm down to 2". Markets served include consumer electronics, automotive, MEMS (micro-electro-mechanical-systems), and R&D/Education. The primary crystal growth technique is the Czochralski (Cz) process but SMI also offers Float Zone (Fz) silicon. Wafers are supplied in various forms, but the primary products are single sided and double-sided products.

In 2015 SMI began an R&D project to further enhance the quality of their products by creating a process to remove surface metals (critical to their customers) by adapting a process used for other purposes in the semiconductor industry. The tool and the process developed require nitrogen and oxygen of high purity

(ozone generation) in large quantities. The use of gas bottles was out of the question. Cryogenic storage was also out, because of the facility's location. In the case of cryogenic solution, the installed cost was also a deterrent. The elegant solution was on-site generation.

The OXYMAT team delivered technical expertise and recommendation for equipment sizing and complete system specification. At the time of this news release, the OXYMAT systems have been started and SMI is commissioning the new process. The results of the pilot production will be known shortly, but are expected to be positive based on initial findings.

For more information regarding OXYMAT A/S and our solutions, visit www.oxymat.com, e-mail sales@oxymat.com or call at +45 4879 7811, and one of OXYMAT's competent employees can guide you to the right solution for your needs. 