June 10, 2015

TMEIC to Exhibit Ozone Gas Generating System Adopting Nitrogen Non-Adding Method at ALD 2015 International Conference on Atomic Layer Deposition (ALD)

Toshiba Mitsubishi-Electric Industrial Systems Corporation (hereinafter, TMEIC"; President & CEO Kiyotaka Machida) will exhibit its Ozone Gas Generating System, which adopts a nitrogen non-adding method and is mainly sold in the semiconductor manufacturing field, at the 15th International Conference on Atomic Layer Deposition (ALD 2015) to be held from June 29 to July 1, 2015 at the Hilton Hotel in Portland, the United States. TMEIC will support the event as a platinum sponsor.

Levels of integration and capacity are advancing rapidly in Large Scale Integration (LSI) chips, memory chips and other semiconductor devices, and in semiconductor manufacturing, needs are growing for processing that can handle even finer patterns and three-dimensional structures. ALD has been gaining attention as a technology capable of controlling film thickness at the atomic level and is contributing to the advanced integration and capacity of semiconductors.

The Ozone Gas Generating System with nitrogen non-adding method that is manufactured and sold by TMEIC is used as a feeding apparatus for oxidant in the ALD process and enables deposition that controls impurities in the gas to the utmost limit. The device has become indispensable in the ALD process, which requires exceptional uniformity in film thickness and high-speed formation of dense film without any defects or pinholes. TMEIC has a proven track record of over 600 units in operation, not only in semiconductor factories around the world but also state-of-the-art research institutes and universities, as systems producing clean ozone gas without any impurities such as nitrogen at ultra-high concentration.

Application of the ALD process has expanded beyond semiconductor manufacturing to include solar battery panels, batteries and bio-MEMS (Micro Electro Mechanical Systems). TMEIC aims to contribute to the advancement of ALD technology through the provision of clean, high-concentration ozone gas.

■About the International Conference on ALD

This international conference has been organized by the Thin Film Division of American Vacuum Society since 2001, making this year the 15th occasion (http://www2.avs.org/conferences/ALD/2015/index.html). The event is held in the Asia region once every four years and was staged in Japan for the first time last year.

The event is growing annually with the number of participants totaling 623 and a total of 318 papers submitted in 2014.

■About ALD technology

ALD is an abbreviation of **A**tomic **L**ayer **D**eposition and refers to a thin film production process that enables repeated growth of the atomic layer by alternately supplying raw material gas and reaction gas.

Since the atomic layers are built up on by one, it is possible to produce film with uniform thickness distribution and composition. The technology has been applied in practical terms in such areas as high-dielectric constant gate insulating film for CMOS transistors and insulator film for DRAM memory capacitors.

Please visit our site about TMEIC Ozone Gas Generating System in detail;

https://www.tmeic.com/TMEIC%20Global/T1RFPQ

TMEIC Ozone Gas Generating System

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In order to respond to the needs of manufacturing sites that serve as a foundation for supporting society, TMEIC always sets its eyes on the future of industry, society and the environment as an industrial systems integrator striking a balance between the development of society and a beautiful global environment. TMEIC will contribute to manufacturing and environmental management through leading-edge technologies based on its core technologies of rotating machinery, power electronics and engineering.