



Value Created through Dialogue with Customers

We pursue *Monozukuri* to create value that contributes to the resolution of social issues jointly with customers.

1 TSURUGI-C^{2®}, High-Quality Film Forming and High-Performance Semiconductor Manufacturing System

Using leading-edge technologies, we create the future with customers

In response to the accelerated expansion of three-dimensional multilayered semiconductor devices, the Company developed the TSURUGI-C^{2®}* high-quality film forming and high-performance semiconductor manufacturing system by adopting a new reactor. We incorporated leading-edge technologies into the equipment to provide high-quality and uniform film forming performance.

The technological needs of customers are highly demanding, including the need to form high-quality films

with uniform thickness on 3D structures, measures to minimize foreign matter for higher yield, and the minimum sizing of the reactor to reduce the time required for high-quality film forming.

Responding to these needs, we are working with our customers to increase the quality of next-generation devices while reducing the production cost.

* TSURUGI-C² is a registered trademark of KOKUSAI ELECTRIC CORPORATION.



Mt. Tsurugi and TSURUGI-C^{2®}

VOICE

The system was named "TSURUGI" after Mt. Tsurugi in the Tateyama mountain range, of which the people of Toyama are very proud. We developed the system based on the concept of focusing on our process technology, and this concept was highly appreciated by our customers. As we head into the age of three-dimensional multilayered structures, we will create products that serve as a mainstay for the Company's profitability while contributing to society with our system development technologies.



Satoshi Taniyama
Thin Film Equipment Engineering Department II

2 SCQI Award Received from Intel Corporation

We received the 2017 Supplier Continuous Quality Improvement (SCQI) award from Intel Corporation.

"Intel is very pleased to recognize the outstanding performance of our award winning suppliers in 2017," said Robert Bruck, Corporate Vice President and General Manager of Global Supply Management at Intel. "They have demonstrated industry-leading technology innovation, accelerated ramp speeds, operational excellence, and social responsibility. Our close collaboration with these suppliers continues to be a vital part of Intel's success in delivering the world's best silicon solutions."



2017 SCQI award trophy



SCQI award ceremony
Photo provided by Intel Corporation

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Only seven companies, including ourselves, received the SCQI award from a field of around 16,000 Intel suppliers. We feel very honored to receive the award and all of us will work on further quality improvement.

Tsuyoshi Okamoto
North America & Europe Sales Department

3 Internal Collaboration System to Enhance Support for Customers' Technology Development

Kokusai Semiconductor Equipment Corporation (KSEC) launched an internal collaboration system using Microsoft SharePoint®, which is used to store and manage internal documents.

Based on this system, employees form teams by project, and now members of the teams can share, update and store all related information and access the latest data at any time. This system is quite effective for a technology development department that is implementing multiple projects concurrently for customers.

* SharePoint is a registered trademark of Microsoft Corporation in the United States and other countries.

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The KSEC development support team has members at three locations, and the system helps the members store documents appropriately and more promptly. It enables all team members to access the same document without fail, eliminating the risk that some might access an older version. All members can now communicate smoothly with each other and use the latest project information. In particular, the system allows any of them to describe the status of the project clearly to customers, which is really important.

Martin Rodriquez
Tech Support Manager, KSEC



4 Highly Reliable Ultrasonic Cleaner for Use by Semiconductor-Related Manufacturers

Kokusai Electric Semiconductor Service Inc. (KSS) produces and sells ultrasonic oscillators and ultrasonic transducers, both of which are used for ultrasonic cleaning.

Ultrasonic cleaners are best known as devices used for cleaning eyeglasses and jewelry, but they are also used to clean semiconductor devices. KSS's products are widely adopted by the leading manufacturers of semiconductor



Ultrasonic oscillator



Ultrasonic transducer

cleaning equipment and used in semiconductor plants across the world.

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There are ultrasonic medical equipment (for echography), ultrasonic atomizers (aroma diffusers) and ultrasonic stain removers in addition to ultrasonic cleaners. They are used in our daily life. I would like to contribute to society by expanding the application of ultrasonic waves in creative ways.

Masaki Okawa
Engineering Department, Applied Electronics Division, KSS

5 Contributing to Customers' BCPs by Proposing Anti-seismic/ Seismic Isolation Methods

In Japan, a country prone to natural disasters, it is very important for companies to make business continuity plans (BCPs) to ensure the early recovery of business after an earthquake.

Kokusai Electric Semiconductor Service Inc. (KSS) has been proposing seismic reinforcement measures for semiconductor manufacturing equipment since 1999, when a large earthquake struck Taiwan, and has also proposed the installation of seismic isolation bases at the bottom of equipment since the occurrence of the Great East Japan Earthquake in 2011. KSS's proposals have mainly been adopted by companies in the automobile industry, which attributes importance to BCPs. When a large earthquake hit Kumamoto in 2016, our proposals proved effective in helping customers to minimize the damage caused to their equipment and achieve an early recovery of their business.

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In the event of an earthquake, we need to dispatch personnel to the afflicted customers, procure necessary materials, collect information and supervise the overall management of the situation as essential measures. KSS has gone through the process of recovery from a large earthquake repeatedly and all of its employees are aware of the importance of promptly building an emergency response system. Based on the strong relationships that we have built with customers through daily operations, we make it a rule to check the status of their equipment after an earthquake, even a minor one, on a 24-hour basis as part of our preventive measures against contingencies.

Masaharu Kitazuka
Service Operation Division, KSS

Inquiries about anti-seismic/seismic isolation measures: Please contact the nearest service base of the Group by phone or fax.