Iwata: Innovative Chemistry and Semiconductors

Japan's Iwata & Co. is a leading light in the semiconductor industry thanks to its high-purity materials and customized equipment, which are driving innovation and global competitiveness in this critical sector.

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> **Takuya Iwata**,
> President, Iwata & Co., Ltd.

Given the intricate world of semiconductor manufacturing, the importance of high-purity materials and sophisticated equipment cannot be overstated. Therefore, it is no surprise that Japanese companies, renowned for their precision and quality, are key players in this industry. The country's government invested over 20 billion USD between 2021 and 2023 in the semiconductor sector, with a focus on supporting next-generation semiconductor technologies through new materials and equipment.

New-type sealant for buildings

Japanese trading company Iwata & Co. is one of the trading firms leading the way in this respect, acting as a coordinator to ensure its customers receive the highest-quality chemicals, materials and equipment. As company President Takuya Iwata says: "Japan's power comes from high-quality materials which allow our firms to be highly competitive in the global market."

Dr. Iwata understands that providing solutions for standard, current semiconductors does not represent added value, so his firm concentrates on quality and precision, something which has always set Japan's manufacturers apart. As every manufacturer has different processes, Iwata provides customized products to respond to its clients' requirements. Dr. Iwata adds: "Trading companies play an essential role in responding to those requests in a speedy manner."

Customized wet cleaner

In 2020, Iwata established a subsidiary called Seibu dedicated to providing customized equipment to the semiconductor industry. The smaller nature of Seibu allows it to be agile and respond quickly to the rapidly-changing nature of the semiconductor industry, and is a reflection of the small-scale factories that have supported Japanese craftsmanship in manufacturing for decades. Dr. Iwata adds: "Seibu plays a vital role in providing customized equipment to the semiconductor industry. As that sector continues to evolve, so too should our equipment."

Japan's ability to connect basic research with practical applications is a testament to its numerous Nobel Prize-winning researchers. This synergy between research and industry positions Japanese companies at the forefront of product development, and this is true of Iwata. Indeed, key to the company's success has been its belief in the power of chemistry. The company is dedicated to the development of next-generation chemicals through experimentation and research, and it therefore contributes to the general evolution of technology. As Dr. Iwata says: "There really are limitless combinations, and people can dedicate entire lifetimes to trying to discover a small fraction of those combinations. Chemistry is essentially the glue that holds our company together."

Despite often operating behind the scenes, Iwata provides indispensable innovation in a range of industries. For example, the company has previously pushed forward the production of high-quality semiconductors by proposing fluoro-resin filters, while it regularly experiments with new combinations of materials in the chemical industry to provide the best products for its customers.

New-type waterproofing material

Its flagship Auton construction material—made using a unique polyurethane—is a prime example of the results of this experimentation. Its chemical makeup ensures that it is an industry-leading sealant, but the product can also be used in construction and Dr. Iwata reveals the company's R&D team are working on a hard coating for surfaces to add to the Auton series.

Rubber-like materials are often used in Japan because of the number of earthquakes that occur there, and the Auton products can be softer, harder or transparent, depending on the needs of its customers, a customization profile that is very rare for a resin. Other products in the Auton range include UREAX-HG, a high-strength waterproofing material for flat surfaces.

Iwata is not resting on its laurels. The company is keenly interested in Malaysia, recognizing its potential as a burgeoning hub for the semiconductor industry in Asia. Malaysia's rapidly developing infrastructure and strategic location make it an attractive destination for semiconductor manufacturing, and to capitalize on this potential, Iwata is preparing to increase its presence in the country. The company is always on the lookout for regional partners with knowledge of the local market to help its expansion overseas.

High-quality sealant

Iwata's commitment to customization and innovation, coupled with Japan's strong research and development infrastructure, positions the company as a key player in the semiconductor industry for years to come, while its commitment to the power of chemistry continues to lead to the development of unique new products. As Dr. Iwata says: "Iwata is striving to be involved in the development of next-generation chemicals, and our mission is to contribute to the evolution of technology on a global scale through the power of chemistry."

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