

Biden's New Ukraine Dilemma

INTERNATIONAL

Newsweek®

Working Wonders



AMERICA'S MOST RESPONSIBLE COMPANIES

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ISSN 2052-1081



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Japan's chemical industry players a step ahead of the competition

The Japanese chemical industry has suffered when it comes to the production of base chemicals due to regional competitors' capacity to offer products at lower costs. However, Japanese chemical manufacturers still remain leaders in highly functional and specialized chemicals. Furthermore, Japan can count on a variety of SMEs to develop niche chemical and material technologies. As such, Japan is well-positioned to meet the ever-evolving demands of a wide range of industries, including automobiles and advanced semiconductors.

"The strengths of the Japanese chemical industry is seen by the number of patents that Japanese companies hold in the field. These still outnumber some other countries out there only because of the foundation that Japanese companies have developed," says Shigeru Takaragi, President & CEO of TODA KOGYO CORP. "Another strength lies in the ability to be niche and produce difficult chemical compounds. This demonstrates Japanese companies' strengths, especially in comparison to some regional competitors that are inherently cheaper and tend to specialize in more conventional chemical compounds. While it is true that regional competitors have mass production, cheaper labor forces, and accessibility to cheaper raw materials, Japanese companies will continue to be competitive and survive, especially when we talk about specialty and complicated chemical compounds."

As they often deal with specialty high-mix, low-volume products, customization and the ability to meet specific client needs is another factor that sets Japanese companies apart from regional competitors. "Our survival hinges on our ability to tailor our products to suit specific applications of our customers," stresses Hayato Hirano,

President of ENEOS Materials, which is engaged in synthetic rubber, thermoplastic elastomers, latex, and other raw materials. "One of our core strengths lies in our expertise in customization technology, which is bolstered by our extensive experience and knowledge in polymerization. Presently, a significant portion of our revenue is derived from baseline products categorized as elastomers. However, our goal is to increase the share of specialized products, such as binders for lithium-ion batteries (LiB) and Solution Polymerized SBR (SSBR) for high-performance tires used in automobiles, including EVs (electric vehicles)."

As a manufacturer of electrolytes for LiBs, the emerging EV segment is also a focal point for MU Ionic Solutions. "It is true that EV and LiB customers, as well as suppliers, are expanding their production capacity. As a battery material supplier company, we believe that this growth in demand will give us a huge opportunity for business growth," explains president Kenichiro Mawatari. "Our target is to capture 25% of the world's demand and at this time market demand for electrolytes for xEV on the basis of LiB-equipped vehicles is 500,000 tons per year, but it is expected to exceed 2 million tons by 2028."

For adhesive manufacturer Alteco, the transition to EVs indeed poses challenges, but also a great opportunity. "We can provide suitable anaerobic adhesives for the motor shaft, motor core, motor magnet and so on. We believe these products will be of interest to EV manufacturers," says president Reo Tanaka. "Another popular product of ours is our light-curable instant glue, which is an instant adhesive that has light curability. The curing is faster than conventional high-speed adhesives due to UV light irradiation. We believe that this is also ideal for EV applications."

Nippon Pigment is also focusing on the EV sector, as well as semiconductors, with its liquid dispersion technology. "For us, power semiconductors will be of big interest and we are working on developing die bonding materials for power semiconductors," says president Tatsumi Kato. "Through aggressive investments in the metal material area of semiconductor production, we would like to make it a core pillar of our future business. This is why we built our new facility in Saitama in 2018. This facility is producing color filters for LCDs and liquid dispersions for semiconductors."

Moving to the health and hygiene industry, Hattori Paper has pioneered alkaline electrolyzed water, whose applications include the company's wet cleaning wipes. "We are a small manufacturer, but we have a big dream. Our mission for alkaline electrolyzed water is to make kitchens around the world safer and cleaner," says president Masakazu Hattori.

Indeed many Japanese SME manufacturers like Hattori have ambitions to grow internationally and Takumido, whose mission is "to drive and revitalize struggling businesses", is there to support their global ambitions. "Japanese companies conduct business in Asia with a strong client-first mentality, often going above and beyond, even at their own expense, to provide exceptional services and maintain a trustworthy *monozukuri* reputation," says president Mitsunori Suwa. "This commitment is a strength we can harness through our company. While these companies may incur significant costs and investments without immediate returns, our support allows them to realize returns in the future. We believe that our support will differentiate our companies from many other Japanese SMEs."

Tsuchiya Kogyo ready to tackle markets with innovative technologies

From automotive and home appliances to theme parks, innovative printing and molding company Tsuchiya Kogyo is bringing its unique technologies to new markets.

"Going forward, we want to emphasize developing original products and providing specialized industrial parts for both the domestic and international markets."

Toshihiro Tsuchiya, President, Tsuchiya Kogyo

Tsuchiya Kogyo uses a broad spectrum of techniques to convert concepts into tangible products, such as durable decals, molded parts and emblems for a wide variety

of applications, including the automotive industry, home appliances, railways, and theme parks.

The company also uses printing, injection molding, and vacuum-forming technologies to manufacture products requiring precision, such as industrial parts. Most notably, Tsuchiya Kogyo is in the process of creating a lightweight plate that can be applied in the automobile industry, especially for the interior of EVs. This transparent light guide plate has the ability to switch between different display patterns depending on the entry direction of light. The company is also developing a durable and

light-weight replacement for chrome plating using insert molding.

Tsuchiya Kogyo's multi-industry know-how has enabled it to expand internationally, and it now has two additional factories in the Philippines, allowing it to export more easily to the U.S. The company is actively seeking overseas partners not only in the U.S., but also in Europe, India, and Vietnam.

"Recently, we have started to diversify into Japanese pop culture projects," says president Toshihiro Tsuchiya. "We, as a manufacturer, strive to develop products that meet constantly changing market needs, including environmental issues."



Comiket 2023



Switchable light guide plate

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ENEOS Materials: Committed to global sustainability

ENEOS Materials aims to promote technology skills, innovation, and contributing to the development of society.



Industrial rubber products

Last year, ENEOS Materials – a subsidiary of Japan's leading oil company, ENEOS Corporation – was established following the break up of JSR Corporation's elastomer business, and is today engaged in research and development, manufacturing, and sales of synthetic rubber, thermoplastic elastomers, latex, and other raw materials. Since the original business was founded in 1957, it has contributed to the development of various industries, including the automotive sector, by supplying various synthetic rubbers both in Japan and overseas.

"In addition to our top-level R&D capabilities and manufacturing technologies cultivated so far, we aim to make use of the ENEOS Group's abundant procurement of



"Our strategy is to transform our operation into a 'glocal' one, effectively combining global and local elements."
Hayato Hirano, President, ENEOS Materials

petrochemical raw materials, funds, and global network to stably supply higher quality and even more competitive products," says the company's president, Hayato Hirano.

"In addition, in order to respond to changes in the business environment, which involves the supply of bio-based products mentioned above. Another is an indirect contribution, which is through the provision of specialized products suitable for energy saving and low abrasion tires.

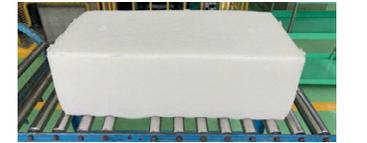


Butadiene Tower

creation and innovation, and contribute to the development of society through materials derived from biomaterials and biofuels."

ENEOS Materials operates with two main missions in mind. One is a direct contribution to carbon neutrality, which involves the supply of bio-based products mentioned above. Another is an indirect contribution, which is through the provision of specialized products suitable for energy saving and low abrasion tires.

"Over the past decade, our company has made significant strides, largely attributed to our overseas production sites, a global sales network, and robust technical support infrastructure across Germany, Belgium, China, Thailand, India, Korea,



Rubber bale (bulk of raw rubber) and the U.S.," says Mr. Hirano. "These strides and measures are based on the 'Glocal' management philosophy and strategy. The business is about global development, however, the operations should be localized. This is at the center of ENEOS Materials' management policy. We will never stop improving our quality and technology skills and the uniqueness of our materials continue to contribute to the development of society."

ENEOS Materials Corporation
www.eneos-materials.com

Magnetic materials for the next generation of vehicles

As the automotive sector undergoes a once-in-a-lifetime change, TODA KOGYO provides unique products, like FEROTOP, to help spark the EV revolution.

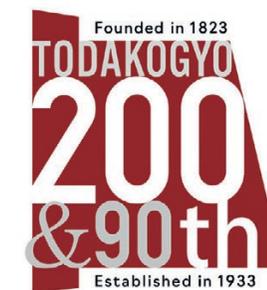


"Our activities right now are geared toward the automotive industry to capitalize on a once-in-a-generation shift."

Shigeru Takaragi, President & CEO, TODA KOGYO CORP.

With more than 200 years of experience in the chemical material manufacturing industry, TODA KOGYO is looking to expand its unique products into the electric vehicle (EV) market. The company uses the characteristics of inorganic materials to develop and supply a wide

range of iron oxides and material parts globally. With an emphasis on R&D, the Japanese firm has developed high-quality materials for toners used in printers and copiers, cathode materials for lithium-ion automotive batteries, and antenna materials for mobile devices.



Anniversary logo

One of the company's most innovative products is FEROTOP, a composite molding material made by mixing resin with magnetic powder, developed by Shigeru Takaragi, President of TODA KO-

GYO. Mr. Takaragi explains that FEROTOP is "a material that allows us to control the magnetic powder and provide magnets with the magnetic properties that our customers are looking for." FEROTOP can be used in components such as fan motors for air conditioners and cooling water pumps for automobiles. The company also provides further solutions for EV production through its use of ferrite material as a replacement for metallic sealing in order to prevent electromagnetic disruption.



FEROTOP®

TODA KOGYO has partnered with fellow Japanese companies to conduct research on new chemical compounds as well as new methods of application. Mr. Ta-

karakagi states that TODA KOGYO is ready to accelerate its business expansion overseas if the opportunity presents itself.



CO₂ solid sorbent

Carbon neutrality has become an important focus in many industries, and Mr. Takaragi explains that the company wishes to "to continue to innovate and develop positive materials that contribute to the global goal of a carbon neutral and Earth-friendly environment."

TODA
www.todakogyo.co.jp/english