

# Japan: Building innovation for the 21<sup>st</sup> century

With much of Japan's modern infrastructure dating back to the country's post-war economic boom of the 1960s, the biggest task for the nation's construction industry today is the maintenance and repair of existing roads, bridges and buildings. And in a highly natural-disaster prone country, ensuring the reinforcement of structures with the latest disaster prevention technologies is also essential. Fortunately, Japan's innovative construction industry players are facing the challenge head on.

"Most of the key infrastructure that we use in our daily lives, such as bridges, tunnels, buildings, and sewage and water supply systems, is old and decrepit. The question of how to rehabilitate it is a big challenge for this country," states Shigeki Kanao, President and CEO of Kanaflex Corporation, whose latest innovation, Kanacrete, a high-strength, lightweight fiber reinforced concrete, has already been put to use in roads and bridges in Japan. "Roads in Japan are aging and the main reason is that the con-

crete slabs underneath the asphalt have rusted and are falling apart due to the reinforced concrete's aging. Kanacrete floor slabs have been used to repair these roads."

While the industry places much attention on maintenance and repair (and rightly so), there remains a grave need for new construction projects also, as highlighted by Tokuaki Kojima, chairman of construction engineering firm Kojimagumi, which provides vital dredging technology to ports and harbors across Japan and the globe. "Many buildings are aging and maintenance is key to increasing their longevity. At the same time, we still need to shift to new constructions and make them more efficient, so the right balance needs to be struck," he explains. "Though not many people talk about it, a lot of projects need to be undertaken in Japan soon. It is time for Japan to re-evaluate its urban planning and harbor planning to make them more efficient."

Part of this re-evaluation will be focused on training and recruitment. Much like its infrastruc-

ture, Japan's population is aging, prompting a seismic contraction in the workforce. As such, the country must open up to foreign labor. "In order for Japan to sustain its growth, it's important to welcome foreign workers," says Sadahisa Sugiyama, Chairman of Minami Fuji, Japan's number one roofing company which also has a training and human capital development arm operating both domestically and overseas. With 1,200 workers in Japan, Minami Fuji has reoriented more attention to increasing its workforce on the global market and aims to become "the number one roofing company in the world," says Mr. Sugiyama.

Expanding global operations is also the focus for IHI Infrastructure Systems, which has long had a presence in the U.S. and is also operating in Asia with several projects under the Japanese government's Official Development Assistance program. "We'd like to expand our business into comprehensive transportation infrastructure services. This business will encompass not only the design

and construction of infrastructure, but also the post-construction management and maintenance of structures," says IHI's Susumu Ishihara. "Our key markets remain in Asia and Europe, but in the future, we'd like to expand our business into Africa. I also see big business opportunities in the U.S. and we are now developing a new strategy for this market in order to meet evolving needs."

Making waves globally in the water treatment business, Nagaoka International has pioneered innovations such as HiSIS (High-speed Seabed Infiltration System). "With this technology, we can replace all the conventional systems needed for desalination," says company president and CEO, Yasuhisa Umeyezu, who affirms that "international co-creation is indispensable" for the company's future growth. "We have collaborated with other companies in the past. Our HiSIS product, for example, was developed by us in collaboration with Hitachi-Zosen. We are looking for core international partners who are atune with global business practices."

## Paving the way for next-generation sustainable societies

By integrating agriculture, construction, recycling and all-weather pavement repair solutions, IKEE Group has earned the reputation as the advanced infrastructure activist.



Paving work in Cambodia: NR#5

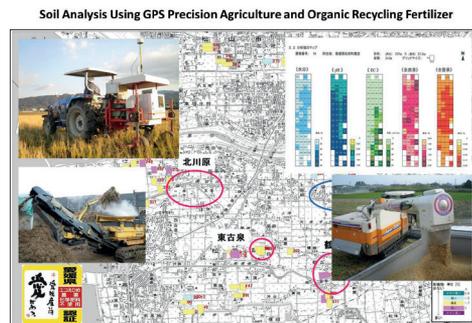
Without the economies of scale of major companies, IKEE Group is instead looking at expansion by targeting countries with more modest markets. President and CEO Shu Nishiyama describes the company as being "like a positive virus, with several small units spreading out to create a wider network, carving out a niche business," as already seen in Kyrgyzstan and the Pacific region.

From road paving and drainage piping to agriculture, materials testing and landscaping, IKEE Group uses synergies to its benefit, allowing everyone to "pro-



"Our group companies can combine and share customers, information and technologies so that everyone in the group can proceed with a common, united purpose."

**Shu Nishiyama,**  
President & CEO, IKEE GROUP



ceed with a common, united purpose," Mr. Nishiyama says. The company is currently in talks to build a plastic- and dioxin-reducing recycling center in Cambodia, which would use plastic waste to make modified asphalt, which can



Nighttime paving for road preservation

then be used in IKEE's prized Excel road repair material. "Excel can be used at room temperature and no machinery is required," the president proudly explains, "all you need to do is step on it."



Easy-to-use Excel

Curiosity lies at the heart of his business, a competitive advantage for SMEs looking to expand globally in an uncertain future.

# Building a bridge between tradition and innovation



"Japanese companies provide not only infrastructure and equipment themselves, but they also work to transfer technologies and knowledge to local partners, and that's exactly what we have done so far and will continue to do."

**Susumu Ishihara**,  
Vice President of Social  
Infrastructure & Offshore  
Facilities, IHI Corporation  
(Former President  
of IHI Infrastructure  
Systems Co., Ltd.)

"We would like to have contributed to infrastructure construction all around the world," says Susumu Ishihara, former president of IHI Infrastructure Systems Co., Ltd. (now Vice President of Social Infrastructure & Offshore Facilities of IHI Corporation), when asked about plans for the next five years. And work on that expansion is already in motion.

"Our first key markets are Asia and Europe, where we have been involved in localization for decades. Since the 1980s, we have built large-scale bridges in Turkey and Vietnam and expanded our business to other European and Asian markets, such as Romania, Bangladesh and India. In these countries, we have not only built new bridges but provided all kinds of maintenance services throughout the bridges' lifecycle. Having accumulated experience and developed human resources in those markets, we would like to expand into the next Asian and European markets."

"Africa is quite an interesting market as there's a growing population and definitely a need for transport infrastructure develop-

IHI Infrastructure Systems is a company that has been firmly combining history, technology and human resources to support the world of infrastructure, pursuing new R&D and DX solutions.



Nhat Tan Bridge (Vietnam)



IHI INFRASTRUCTURE ASIA  
CO.,LTD. (Vietnam)



Osman Gazi Bridge  
(Turkey)



Sakai Works (Japan)

ment," Mr. Ishihara adds. "Also, this year's Eighth Tokyo International Conference on African Development (TICAD) will be held in Tunisia, and therefore we are expecting bigger opportunities and more projects in the region."

Big opportunities in the United States are also on the mind, especially given President Joe Biden's infrastructure plan, with commitment a key aspect to any of IHI's foreign expansions.

"We have been involved in the American infrastructure market for a long time, but we are now developing a new strategy to meet its evolving needs," Mr. Ishihara says. "Once we've decided on a country or area to focus on," he

continues, "we want to commit to it for a long time, just as we have, for example, in Vietnam, Myanmar and Turkey by establishing local business centers and factories. It's not about hopping from one project to another solely for revenue."

And it's not only about providing infrastructure and equipment, but also working to pass on technologies and knowledge to local partners, an example of this being the Nhat Tan Bridge in Vietnam, which showcases the company's expertise while transferring the technology and skills to local engineers. Yet more partnerships are desired.

"We need a business partner," Mr. Ishihara shares. "Our main busi-

ness is bridge construction, but if you look at European markets there aren't many projects planned solely for bridge construction; there are more projects in the form of integrated infrastructure packages, which include adjoining roads and tunnels, along with the bridges. We have vast global experience in tunnel boring machinery and our goal is to move from a manufacturer to a contractor in the tunneling business fields. Acquiring tunnel construction technology will provide us with more opportunities, so this is our immediate objective.

"The other partner we desire is one to help us speed up our processes in the areas of R&D and DX (digital transformation). We've already started discussions with startups that could aid our pursuit of new technology for this."

IHI's future growth is also very much aligned to environmental and sustainability targets. "Our goal is to make our value chain carbon neutral by 2050," Mr. Ishihara states. "In order to achieve this, we have separated carbon emissions from our main supply chain into three distinct scopes — fuels, electricity and raw materials — and we are currently preparing the detailed plans for reducing carbon emissions in all three."

Given that the company's main function here is to manufacture and produce steel structures, IHI's CO2 reduction plans and carbon neutral technology will focus on the electricity scope, while the company is also offering solutions to reduce steel materials by involving itself from the design stage. "We believe that shortening the construction period and limiting traffic restrictions will alleviate congestion and, as a result, reduce CO2 release," Mr. Ishihara says.

To conclude, Mr. Ishihara articulates IHI's two management philosophies: "to contribute to the development of society through technology" and that "human resources are our single most valuable asset."

**IHI**

[www.ihico.jp/iis/en](http://www.ihico.jp/iis/en)



The world's largest grab dredger "Gosho"

# Kojimagumi: Laying the ground for new collaboration

With over 100 years of experience in dredging and land reclamation, construction engineering company Kojimagumi is uniquely placed to meet Japan's infrastructure needs and help re-evaluate the country's approach to urban and harbor planning.

Almost 60 years on from the construction boom of the 1960s, Japan finds itself caught between the need to maintain existing buildings and lay foundations for new ones. Factors such as population decline and the country's susceptibility to natural disasters make the balance even harder to strike. Despite providing high-quality construction, Japanese companies are losing out to foreign competitors who can operate more decisively and at lower costs.

As Tokuaki Kojima, chairman of influential construction engineering company Kojimagumi, knows only too well, improving safety across Japanese territories is also about challenging false perceptions: "In land reclamation, it is very important for us to co-exist with the ocean and the key here is understanding. We worked with DEME, a Belgian company, on two projects in Singapore. They told us that it took them 20 years to get the message across that their projects are not destroying the environment and that in fact they create more sustainable environments. It is crucial for that message to get across: we are not dredging and moving sludge to harm the environment but, rather, we are helping the environment through our work. Dredging is crucial to safeguarding human as well as marine lives."

Kojimagumi's work, a large part of which is carried out in coastal environments, is es-

sential in preventing disasters such as flooding and in helping restore ports following strong weather events. The company's grab dredger vessels are both more economical and more efficient than those of countries such as the U.S.A., with the



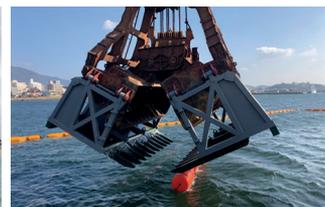
Clockwise from top left: "Gosho"; Disaster-prevention bucket; Project in Singapore; Hybrid grab dredger "381 Ryoseimaru"

hybrid 381 Ryoseimaru able to generate electricity as it operates. And while Japanese construction firms have been slow to embrace digital transformation, Kojimagumi's grab dredging vessels have autonomous operating capabilities, a fact that could prove crucial as the company looks to the future.

With projects recently completed in South Africa, Cameroon and Singapore, the next step is to move into the East Asian and

Southeast Asian markets, targeting countries with budgets for harbor and port construction.

As Mr. Kojima is keen to point out, however, operating on a global level requires more than just a strategy. Commercial success is about collaboration:



"I believe that the successful attainment of the U.N. Sustainable Development Goals depends on creating partnerships between companies that have the same objective in realizing these goals."

Tokuaki Kojima,  
Chairman,  
Kojimagumi Co., Ltd.

"Building trust with customers is a very important factor in business. The first time we went overseas, we worked with China Harbor and established a good relationship with their employees. If you communicate well, you can understand each other. The relationship we built led to the project's success, and the same is true for the Belgian company we worked with. We were able to gain their trust by providing what they needed even before

they asked us. We have been able to come this far thanks to these kinds of relationships. When we talk about creating world peace, I believe that communication is key and that it leads to a much better society. I do not consider myself a 'smart' guy, and this is why I follow my heart. It is important to trust others."



kk-kojimagumi.co.jp/english

# Minami Fuji: The human development specialists

Founded in 1944 as a roof contractor, Minami Fuji has now created a human resource network spanning Asia where they train young ambitious personnel to become independent full-fledged members of society.



"Currently, we are building the No. 1 comprehensive exterior business in Japan and the No. 1 network in Asia for human resources."

Sadahisa Sugiyama,  
Chairman of the Board,  
Minami Fuji Co., Ltd.

With over half a century's worth of experience, Minami Fuji proudly ranks as Japan's number one roof construction company and leads the way in human resource and business development not only in the Nippon nation, but across all of Asia. One of the reasons behind this is the focus on targeting and developing the right people.



GMC for Talent Development started in 2005 in China

"In order to recruit high level personnel as human resources, it's important to educate them, as we all have different cultural, linguistic and religious backgrounds," says Sadahisa Sugiyama, the company's chairman of the board, adding that, "education materials in Chinese, Vietnamese, Cambodian, Japanese and many other languages ensure a united team, utilizing a wide-reaching resource pool for talent."

Free tuition — including the Global Management College (GMC) which trains candidates to become co-owners and managers



The best in Japan for construction power and craftsmanship, Roof Exterior Business



ROOF Meister School



Building the best network of craftsmen in Japan

building a new construction to the European idea of maintenance and longevity of buildings being the main priority," he explains, adding that there is also real value in welcoming foreign workers into Japan and the need to evolve.



The Top 1% of talent at GMC among over 500 participants

"Innovation is critical, so it's not just the design of new products that is important, but the evolution of existing designs should become more common.

"Even in the age of digitalization, roofing construction work remains important and in demand. You can't use automation to replace the roofing construction process, so we have shifted ourselves with the aim of becoming the number one roofing company in the world."

And with different business streams comes significant synergies.

"One of our human resource development projects, RMS (ROOF Meister School), focuses

on the societal issue of NEETs (Not in Education, Employment, or Training) in Japan, as well as the declining birth rate and aging population. After three months of free training and subsidized living expenses, the RMS attendees will work for us as roofing specialists,



Practical education for many students both at home and abroad helping in some way to alleviate the shortage of human resources," Mr. Sugiyama says.

"Overall, we are experiencing a win-win situation. I consider social development as seed planting or investment, and that is important in achieving an advantage in the long term.

"In developing human resources abroad, we are entering through a cultural perspective, not through an economic perspective," he continues, "so we are able to integrate smoothly into the school and have a collaborative partnership with them. And we would like to continue this in other countries as well, not only in universities but also other educational facilities. Although our GMCs are provided free of charge, creating a human network is priceless."

While understanding the challenges that are faced in today's society, especially with technological advancements, Mr. Sugiyama has some advice for the younger generation.

"If you have the wisdom, the sincerity of heart, and the flexibility of mind, you can overcome anything," he says.

As Minami Fuji looks to grow internationally, the intangible assets of wisdom and know-how in human resource development can be shared even further.



Collaborating with top universities abroad in Asia for over 50 years

"I think that the scrap-and-build approach to renewal in Japan needs to be changed into one characterized more by the renovation or refurbishment of existing buildings.

"We have five office renovation projects, but it is important to shift the Japanese mindset from

# Kanaflex spearheading a revolution away from conventional steel reinforced concrete

With proprietary technologies such as Kanacrete, Kanaflex is developing innovative materials and products to replace conventional reinforced concrete for the infrastructure of the future.

More than half a century on from the construction boom that coincided with the 1964 Olympics, much of Japan's infrastructure is old and in need of repair.

"Reinforced concrete is a key material in civil engineering as well as construction," Kanaflex president Shigeki Kanao notes. It is also, however, susceptible to rusting and to a phenomenon called freeze-thaw, where water gets inside the material and freezes, causing cracks. This is the main factor behind the aging of infrastructure such as roads, bridges, tunnels and sewers.

Thanks to Kanacrete, a high-strength lightweight fiber reinforced concrete developed by Kanaflex, both these issues may soon be consigned to the past. Boasting approximately twice the compressive strength and three times the bending strength of conventional reinforced concrete at half the weight, thanks to its excellent thermal insulation properties, Kanacrete can easily adapt to various environmental, climatic or temperature conditions. It is unaffected by



Kanacrete floor plate

bridge and to repair concrete slabs underneath one of Japan's main expressways — initiatives carried out with the approval of the Japanese Ministry of Land, Infrastructure, Transport and Tourism. Given that the material's lifespan is four to five times that of conventional reinforced concrete, this will lead to significantly lower infrastructure-related running costs.

A composite-replacement panel made from Kanacrete, meanwhile, has the potential to be a cost-efficient, durable alternative to wood: a development which could help protect Southeast Asian rainforests, 80,000 square kilometers of which are lost every year. Protecting rainforests, Mr. Kanao states, has been a "personal and primary occupation for the last 30 years".

In recent years, Kanaflex has also made significant strides in the areas of water supply and sewage repair technology. "Replacing old and damaged pipes is one of the most serious problems facing Japan today," adds the company president. The process is time-consuming and expensive, but thanks to the company's KanaSlip technology, which can be inserted through a manhole — a non-open-cut method — restora-

tion is both simple and economical. KanaSlip pipes are resistant to toxic gases and have a lifespan of 50 years.

With the Japanese domestic market shrinking, news that the Biden administration in the United States has set out its bipartisan Infrastructure Law, with a budget of USD 550 billion, represents a significant opportunity for Kanaflex to grow its international brand.

Introducing products to the global market can be complex owing to differing national regulations, but after a six-year process, Kanaflex recently obtained approval from the U.S. government for its Kana Hyumu pipe, as well as receiving similar requests from many other countries. The pipes' durability has been certified by the U.S. government as exceeding 260 years and MP-42 (Kana Hyumu) has been accredited by the American Association of State Highway and Transportation Officials (AASHTO).

Kanaflex's future looks very bright. At home, the company has acquired the support of Japan's governing Liberal Democratic Party, and discussions are taking place at the highest level regarding the need for infrastructure regeneration. Meanwhile, the development



"We are looking to expand further into Asia, Europe and the United States."

Shigeki Kanao,  
President & CEO,  
Kanaflex Corporation Co., Ltd.

of unique technologies such as KanaStone, a composite panel of natural stone that is lightweight, durable and easy to install, will no doubt add to the company's burgeoning international reputation.

ATRI TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

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### Corrosion Service Life of Kanaflex High Strength Steel Reinforced HDPE Pipe

For  
Kevin Cornell  
Senior Sales Engineer

Kanaflex Corporation-USA Pipe Division



By  
Mario Paredes  
TRI/Environmental  
Senior Research Engineer  
Pipe Testing Division  
September 30<sup>th</sup>, 2020

Exposure Solution	Table 2. Galvanized Specimens Data Summary					
	Corrosion Rate of Zinc (mpy)	Service Life (Years)	Corrosion Rate of Steel (mpy)	Service Life of Steel (Years)	Service Life of Steel (Years)	Service Life of Steel (Years)
300 ppm Cl <sup>-</sup>	0.289	1.2	0.324	50.2	25.1	51.5
Cyclic 300 ppm Cl <sup>-</sup>	0.101	3.6	0.148	109.5	64.7	113.0
1 KOhm-cm	0.022	16.6	0.078	208.1	104.1	224.8
10 KOhm-cm	0.060	6.0	0.063	258.4	129.2	264.4
14 KOhm-cm	0.066	5.5	0.092	177.2	88.6	182.7

In the Florida 100-year durability test, KanaPipe's durability was certified as being 264 years

The greatest obstacle to solving Japan's infrastructural problems is the old, conservative mindset of government institutions and large businesses. If it is to survive, Japanese industry needs an innovative generation of young entrepreneurs who, supported by strong organizations and the public, are not afraid of change.

**Kanaflex**

Kanaflex Corporation Co., Ltd.

www.kanaflex.co.jp



MP-42 (Kana Hyumu) has been accredited by AASHTO freeze-thaw and less likely to rust since it contains no steel bars.

Already in use as a panel for construction, the material has recently been deployed to build a highway

# Nagaoka International sails forth into unfamiliar waters

An acknowledged player in the petrochemical industry, Nagaoka is revising its priorities by focusing on water intake and purification systems to meet the U.N. Sustainable Development Goals and enhance its global brand.



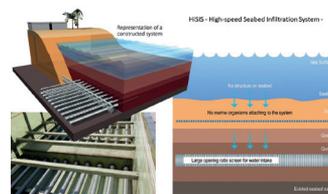
Nagaoka screens

A company that has made significant contributions to the energy and water industries through its screen technologies, Nagaoka generates 84% of its turnover from overseas markets. Recent years have seen the company devote more resources to its water division in a bid to achieve the U.N. Sustainable Development Goals and help address the world's growing water crisis through its business.

According to Nagaoka president and CEO Yasuhisa Umezu, "only about 3% of the Earth's water is fresh water and even less is currently drinkable." Fortunately, with its CHEMILES technology,

the company has a solution. "The unique feature of our CHEMILES technology is that we take underground water and remove harmful substances from it without using any chemicals," he adds.

The company also boasts a High-speed Seabed Infiltration System (HiSIS), which is used by desalination facilities specializing in underground seawater intake, and has the potential to accelerate what is traditionally a complex process.



HiSIS

With interest in its technologies already coming from public water-work companies, Mr. Umezu is keen to emphasize that Nagaoka is also

targeting private enterprise. "We supplied a number of CHEMILES to food and beverage companies in domestic and overseas markets." Co-creation, meanwhile, is "indispensable for future growth."



CHEMILES

Looking to the future, Mr. Umezu acknowledges that Nagaoka's shift to water will have an impact on their overseas presence. Vietnam, however, is a likely focus. "Vietnam has very low labor costs, is geographically well placed and is a politically neutral country," Mr. Umezu says.

Adjusting its priorities has brought Nagaoka increased international recognition and multiple awards. The launch of its



"Our uniqueness is to focus on underground water, which is considered an untapped and underlying natural resource."

Yasuhisa Umezu,  
President & CEO, Nagaoka  
International Corporation

CHEMILES technology, a product with truly global appeal, means further success could be just around the corner.



# Japan's Nissaku creating social value through geological engineering excellence

Through well construction, geological survey work and advanced civil engineering technologies for disaster prevention, Nissaku is paving the way for universal access to clean water through its activities in Africa and Asia.



SfM and LiDAR using UAV for 3D topographic analysis

Companies which have prospered for over a century often have one thing in common: a driving philosophy that allows them to prosper in any business environment. Japanese water and geological engineering firm Nissaku has used its commitment to putting human resources first and improving society through new technology to push its industry forward for over 110 years.

Nissaku has three main divisions: well construction; geological surveys; and advanced civil

engineering specifically related to disaster protection. The company employs personnel from a wide range of backgrounds to ensure it provides novel solutions, which include its MVP 360-degree underwater cameras, patented Renewell Well Repair Method, as well as the latest AI and IoT-related solutions.



Villagers gathering at a new water supply facility (Zambia)

Behind all these innovations is Nissaku's commitment to im-

proving lives, as demonstrated by the company's projects in Africa, South America and the Middle East, which were carried out through Japan's Official Development Assistance program. "Our company aims to help raise the quality of life in these areas by providing clean water," stresses president Naoki Wakabayashi.

As Nissaku aims to expand in Vietnam as it has with successful projects in Nepal, the company is always looking for partners with knowledge of the local market to help carry out its ambitious projects. This expansion is not driven by profit, but by a focus on people. "Profit is not the most important thing," says Mr. Wakabayashi. "Sustaining the business is in the middle and at the top is social and human capital, which is the most valuable asset for any company."



"Our company philosophy is to contribute to society with a combination of traditional and cutting-edge technology. We would like to use our technologies to help areas where accessing water is difficult."

Naoki Wakabayashi,  
President, Nissaku Co., Ltd.



# The most simplified water analysis tool: PACKTEST



"Our philosophy for our products has always been making simple water analyzers for anyone, anywhere."

**Shuntaro Okauchi**, President, Kyoritsu Chemical-Check Lab Corp.

Designed to be one of the world's simplest water analysis tools, PACKTEST was launched in 1973 and is Kyoritsu Chemical-Check Lab's flagship product. Diversification followed—into education, wastewater management and fac-

Since 1952, Kyoritsu has been supporting aquatic conservation through its provision of simplified water quality checkers to the world.



Creation Center

tory quality control—as the product evolved into what it is today.

"The PACKTEST is a polyethylene tube containing pre-mixed reagents to measure a specific analyte," explains company president, Shuntaro Okauchi, who says that the uniqueness of Kyoritsu's products lies in their simplicity and wide variety. "The result can be seen right away with the color coded indicator," he adds.

With competition rife, and an acute awareness of environmental responsibilities, Kyoritsu has another advantage, having chosen to keep toxins well away from their reagents.

"Other simplified water analysis tools may use hazardous materials.

They might have stronger reactions for accuracy, but only a limited number of people can handle them. We believe the absence of toxic materials makes our method superior, and this is what sets us apart."

The progress made on products has been complemented by other decisions taken by the company, including changing location to appeal more to younger prospective employees.



PACKTEST

"Moving to our new location, one dedicated to lab, R&D and manufacturing, helps us to break away from some stereotypes. We wanted to show that our facility provides



Compare colors for result

a different working environment from what people may expect. Our head office, factory and lab are all here, while part of the manufacturing site remains in Tokyo."

Staying ahead, while maintaining international growth ambitions, means focusing product development on the customer, and in April 2020 the iPhone app, SMART PACKTEST was launched.

"We keep striving to make our products easier, more convenient to use, and fit for customer needs," affirms Mr. Okauchi.



<https://en.kyoritsu-lab.co.jp>

# Maxpull: Trustworthy winches for a range of uses

Winches are hidden protagonists that support many aspects of industry and daily life. Maxpull is the go-to specialist catering to these diverse needs.

Founded in 1976, Maxpull specializes in manual and electric winches that move loads vertically or horizontally in a wide range of situations.

"We don't target a particular field," says Maxpull's president and CEO, Koichi Ono. "Have you ever seen McDonald's rolling advertisements? They use our



Winch-supported parade float winch to take them up and down. In zoos, our winches keep nets up to stop flamingos from flying out.

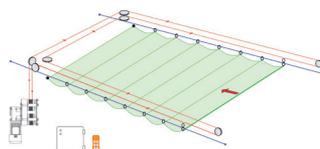
During a Japanese street parade, a Maxpull winch allowed a huge doll on a float to duck below overhead wires. These are some of our product applications."



Best-selling GM Series manual winch

As Japan targets carbon neutrality by 2050, Maxpull also plays a role in the production of renewable energy. In wind power generators built by Mitsubishi Heavy Industries, its winches carry replacement parts up to the 100-meter-high turbines.

Maxpull is dedicated to *monozukuri*, the pursuit of perfection that underpins Japanese manufacturing—and central to this commitment is a focus not only on product safety, but also meeting clients' needs to the letter. "We listen carefully to our customers," Mr. Ono says. "Our unique strength lies in talking with them and finding out what objects need to be moved and in which direction."



Wire mapping

In Japan, Maxpull enjoys a 70% market share; however, shrinking domestic demand due to the country's aging population led the



"We're building a sustainable company through global expansion."

**Koichi Ono**, President & CEO, Maxpull Machinery & Engineering Co., Ltd.

company to begin expanding its global reach in 2013. "Our primary target is Southeast Asia," Mr. Ono says. "We now have distributors in Singapore, Malaysia, Vietnam, Indonesia and Thailand.

"We're also taking an aggressive approach in sales and marketing in European countries like Germany, the U.K., France and Spain, as well as in the U.S. and other developed nations."



[www.maxpull.co.jp/english](http://www.maxpull.co.jp/english)