

WAMGROUP® NEWS

Issue No. 1 | MAY 2019

The Most Trusted Brands in Bulk Solids Handling & Processing, Waste Water and Renewable Energy

THE KOREAN EXPERIENCE

Jinho Park, aged 50, was born in Cheongju, the capital of the South Korean North Chungcheong Province. After obtaining a BA degree at the INHA Institute of Technology—a technological research university of national recognition and strong reputation—in the 1990s, Park worked as a project management engineer for a domestic construction company. On the occasion of the opening of WAMGROUP®'s Korean affiliate in 2003, he was offered the post of General Manager in the new subsidiary, which he holds to this date.

Newsletter How has the Korean market developed since you've been in charge?

Park Following a dramatic growth experienced in building and construction throughout the 1980s and 1990s, the market was almost saturated just when we started back in 2003. So, we had to look out for alternatives, which we found in wastewater treatment, fly-ash handling and mainly in the secondary battery industry.

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Newsletter Can you see any particular characteristics of your market?

Park The subsidiaries from APAC countries have to deal with long delivery times as long as production has not yet been offshored to WAMGROUP®'s manufacturing hub in Wuxi, China. Fortunately, the localisation process is ongoing, which is the right solution to the problem.

Newsletter Any major challenges for the company and yourself at this moment?

Park WAM Korea is proud of its success in the secondary battery sector. However, the technological development in this industry is breath-taking.

“With our ploughshare mixers we are able to match our customers' needs by offering state-of-the-art design solutions.”

This means that we have to be proactive in following our key accounts by continuously innovating their processes. With our ploughshare mixers, in particular, we are able to match their needs by offering state-of-the-art design solutions that put us time and again ahead of both our Asian and

European competitors.

Newsletter Are there any major opportunities in the short and medium term?



Park Obviously, the secondary battery sector is the biggest pie in sales right now. Investments of some of those companies are now focused abroad. Consequently, their projects involve more than one WAMGROUP® company. Cooperation amongst the subsidiaries is therefore becoming mandatory and a strategic advantage over our competitors.

EDITORIAL



Dear Reader,

After work comes more work. For almost two years prior to the inauguration of the WAMGROUP® Technology Centre in 2018, the staff of the Corporate Communications Centre was largely involved in planning and setting up the WAMGROUP® Academy and showroom.

Now that the task has been accomplished, a new challenge arises. The main objective of WAMGROUP® to establish an institution with the aim of training the Group's own employees, at the same time being a meeting place for young jobseekers, makes it necessary to promote the new institution in the region first. How to put the Technology Centre on the map is a question that needs more than one answer. Advertising via our websites, internet portals, a personalised Google Street View appearance and articles in a number of international journals have been important initiatives of the past nine months.

Best wishes,

Michael Grass

WAMGROUP®
Public Relations Manager

EVENTS KICK-OFF AT THE WAMGROUP® TECHNOLOGY CENTRE

Ponte Motta, Italy, July 2018 to April 2019



Graduates from "Galilei" grammar school in Mirandola, Italy

When entering the showroom of the Technology Centre you will read: "The WAMGROUP® Technology Centre is a private facility for research and development in bulk solids handling and processing, as well as various environmental technologies with a focus on dust filtration, solids-liquid separation in animal husbandry and various industries, on water treatment and hydro-energy. The facility includes a research laboratory, a training centre and a permanent exhibition."

Despite initial logistical and administrative challenges, the first months after the grand

opening saw already a few events including seminars for both dealers and customers from various parts of the world, as well as training courses and workshops for WAMGROUP®'s salespeople from the Italian and foreign subsidiaries. To ensure maximum efficiency of the courses, the events were divided by macro-region.



African customer seminar



Sales training for WAM do Brasil staff

WAM® IN THE WORLD'S MOST INNOVATIVE COUNTRY

Seoul, Republic of Korea, Winter 2018 - 2019



The Bloomberg Innovation Index, which is based on research and development, manufacturing, high-tech companies, post-secondary education, research personnel, and patents, has ranked South Korea since 2014 as the world's most innovative country for six consecutive years.

The lithium-ion cell and battery market in South Korea is expected to register a positive Compound Annual Growth Rate of 15.3% in terms of revenue during the forecast period 2018-2022. Increased reach of the government's Green Energy Policy and establishment of partnerships by companies with the government for its projects will augment the growth in the market. (source: CISION PR Newswire)

As WAM Korea's general manager Jinho Park points out in the front-page interview, the success achieved in recent years in the secondary battery industry has given the subsidiary

a big boost. Over time, the Korean industry in particular has achieved a tremendous technological advantage in this field.

However, with the increasing development of electric vehicles, there are first signs that investments are also being made in Europe—by European companies. Korean manufacturers, too, are building plants in Europe entering partnerships with car manufacturers to meet the rising demand from the market there.



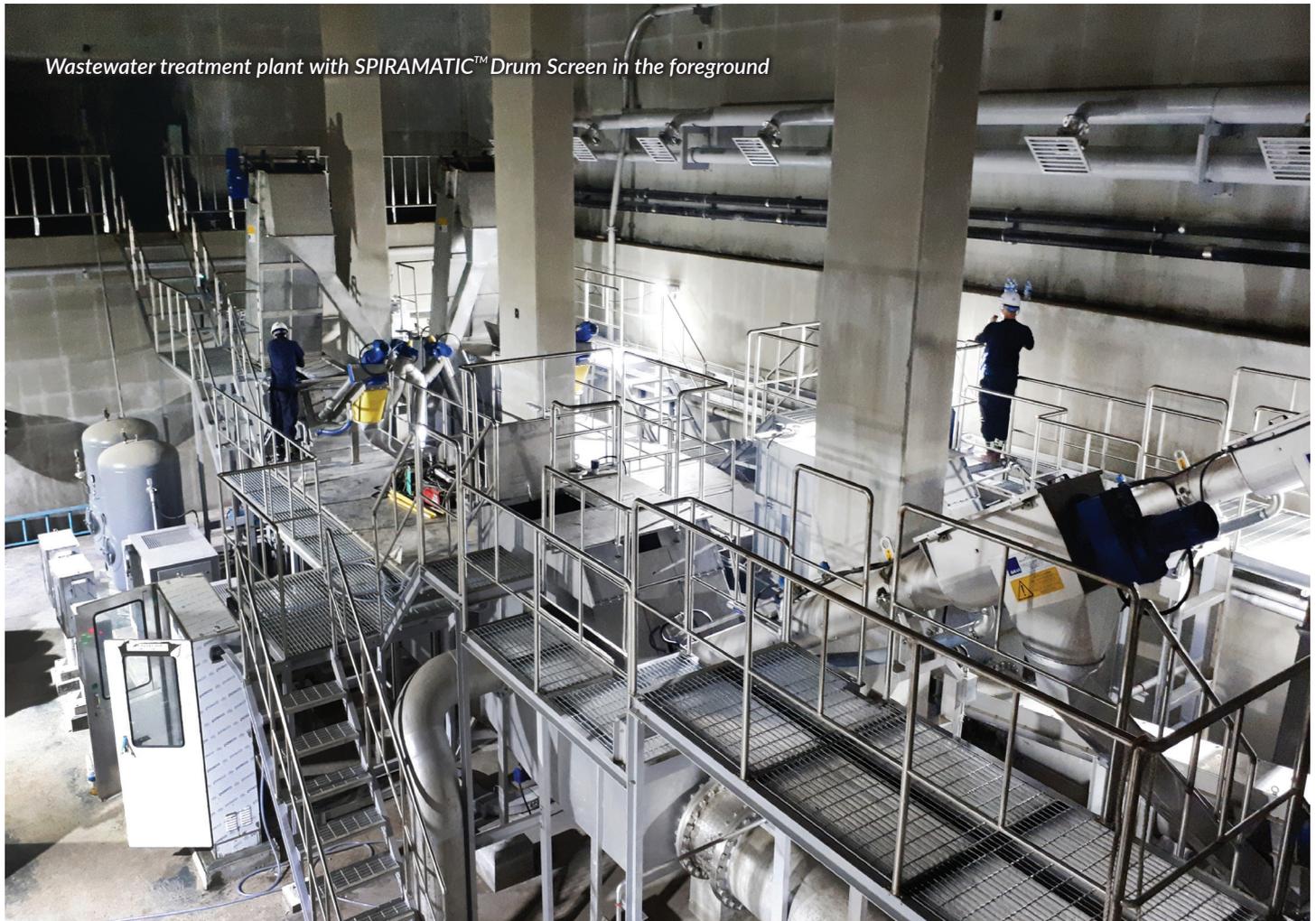
A close strategic cooperation between the Korean WAMGROUP® subsidiary and WAM in China has proved to be profitable for both sides, the People's Republic being the world's foremost future market.

Battery compounds are not the only sector offering potential for WAM Korea. Wastewater treatment in both municipal and industrial applications has been in the focus of Jinho Park since the foundation of the branch. It took time for the company to make a name for itself in the sector, but efforts have since paid off.

Since SAVI® has been part of the Group, Park recalls, the additional know-how and expertise along with the SAVI® range of products have significantly increased the chances for WAM Korea of being considered in public tenders.

NO WASTE OF WATER IN KOREAN WWTP

Namyangju, South Korea, since 2017



Wastewater treatment plant with SPIRAMATIC™ Drum Screen in the foreground



GVB Bar Screen and FTR Drum Screen

The municipal wastewater treatment plant of Namyangju, a city in the north-eastern Gyeonggi Province of South Korea, can handle wastewater at an hourly rate of 30,000 litres through a membrane filtration process. Upstream of the membrane filter a particularly reliable fine screening system is mandatory. Due to limited space, a compact plant by SPECO® would be the ideal solution. WAM Korea suggested three sets of screening systems for coarse, medium, and fine screening. The first stage consists of two GRITSEP® DSF Aerated Grit Chambers followed by a SAVI® GVB Sub-vertical Mechanical Bar Screen with 15mm screen mesh. The WASTEMASTER® FTR Rotary Drum Screen by SPECO® installed on top of the DSF brings down grain size to less than 6mm before a SPIRAMATIC™ VSA Fine Drum Screen

withholds even smaller particles with its screen mesh of 0.75mm mesh to prepare for the membrane filter.

The wastewater plant was erected near a newly built residential area equipped with a centralised sewage collecting pipe. As a consequence, the primary screening system had to handle a high effluent volume, which had become a major challenge for the engineering company, KORYO Development from Seoul, as well as the plant operator, TSK Water. However, since the installation of the GVB, the wastewater treatment process has been up and running without any problem. Asked whether they were happy with the result, TSK Water confirmed the performance of the system exceeded their expectation.

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WAM KOREA'S BATTERIES RECHARGED

Iksan, South Korea, since 2016



MAP® Ploughshare Mixer

For battery production, three components are required: cathode, anode, and a separating membrane. One of Korea's leading manufacturers of chemicals for battery compounds runs a plant in Iksan where cathode material is manufactured, the mixture of lithium and NCM precursor. After being mixed, the material is transferred to the furnace in which a chemical reaction takes place. Subsequently, it goes through a mill to be ground into a very fine powder

having a particle size of about 5µm only.

In 2016, WAM Korea was awarded the order for a 550-litre and a 3,000-litre batch mixer by MAP®, the latter as a replacement for a traditional turbo-mixer. The threefold capacity, reliability in operation and durability of the ploughshare mixer soon earned it high recognition by the customer. It was just only the beginning of a success story that has led MAP® and

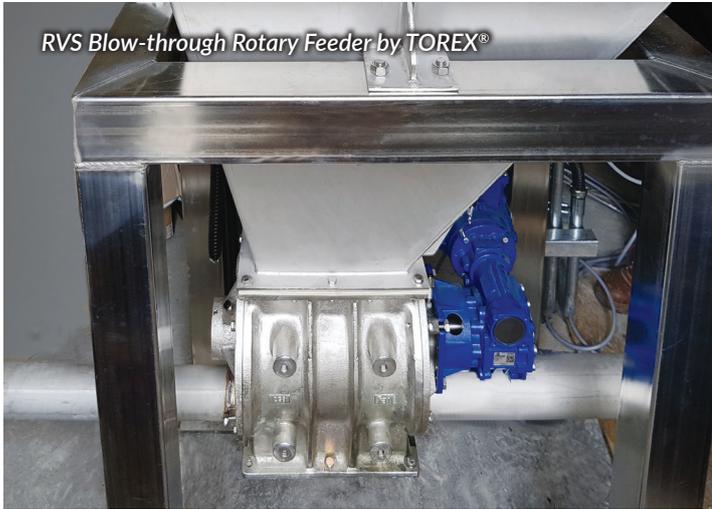
WAM Korea to developing the state-of-the-art mixing machine for this particular application. The quality of the mixture exceeds by far that achieved with other mixers. Customized solutions in chamber lining, mixing tool and chopper coating, as well as special shaft seals to ensure contamination-free operation have been implemented. By now, the MAP® standard has prevailed among various customers in the industry.

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DELICIOUS KOREAN DOUGHNUTS

Seongnam City, South Korea, since 2016



line. Regarding the equipment required, they were looking for a one-stop-solution, which WAM Korea was able to provide.

With its high potential for WAMGROUP®'s specialised product range, the local food industry had been in the

SHANY is a Korean producer of formulated premix products for doughnuts, bread and other bakery products. For an existing plant, they intended to diversify their range of pre-mixtures by adding two storage silos and a pneumatic conveying

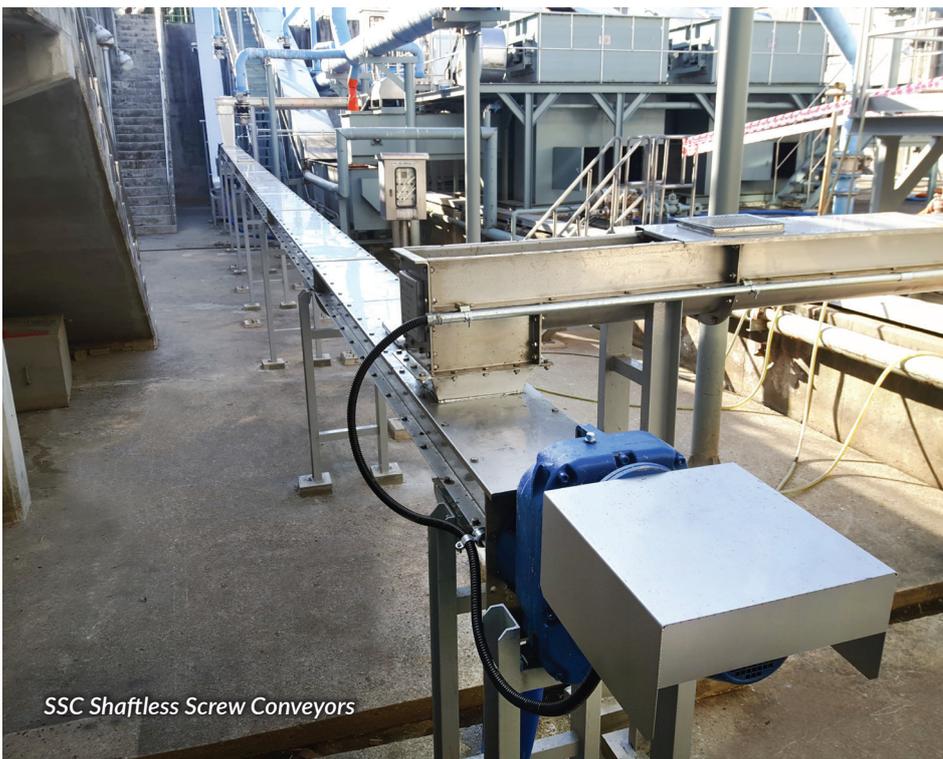
focus of WAM Korea since the early days. The WAMFLO® and WAMAIR® Dust Collectors, the Bin Activators, Rotary and Diverter Valves and the EASYCLEAN™ Screw Feeder installed by SECHANG have been operating to the customer's total satisfaction.



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SOUTH KOREA'S LONGEST SHAFTLESS SCREWS

Changwon, South Korea, from mid-2019



Since its opening in 2003, the municipal wastewater treatment plant of Changwon has struggled with its rake bar screen and conveying system made up of belt conveyors. A high water content of the screenings and fastidious odour were the main problems.

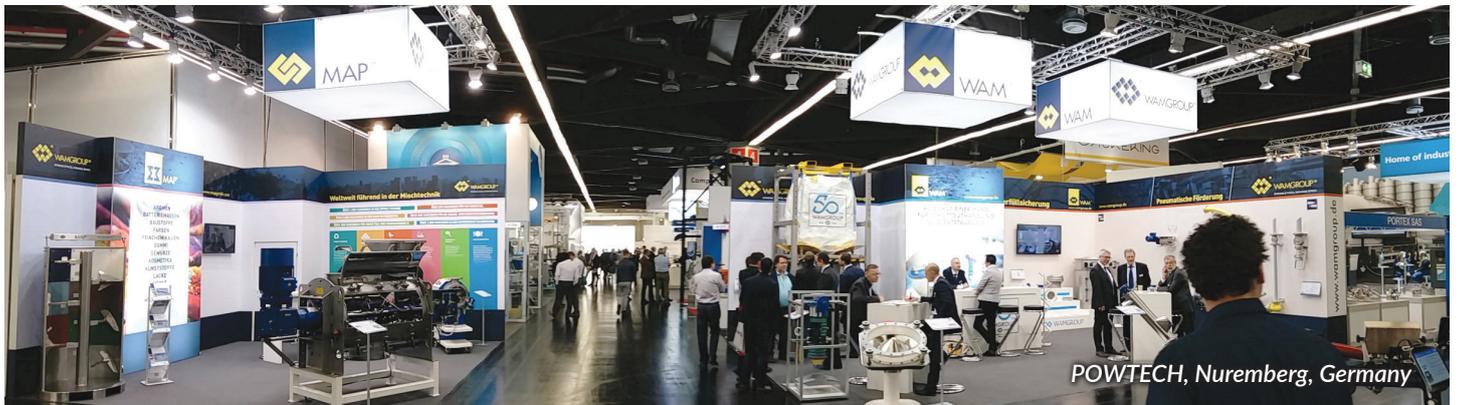
WAM Korea suggested a closed system with a WASTECOM® CPS Screw Compactor and SSC-type Shaftless Screw Conveyors. The new system reduces the liquid content from 90 to 75%, while the Shaftless Screws convey the screened solids contamination and odour-free, which keeps the workers particularly happy.

The up to 20-metre long SSC-type Screw Conveyors are the longest of their kind installed in South Korea so far.

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EXHIBITIONS +++ EXHIBITIONS +++ EXHIBITIONS

Exhibitions 2019



POWTECH, Nuremberg, Germany

Every year the Corporate Management of WAMGROUP® is asking the managers of the trading subsidiaries the same question: “What benefits can we derive from trade fair appearances?” It is, in fact, very difficult to precisely measure the effects of any trade show participation. Creating brand awareness takes time apart from skills. Finding the key to penetrate the collective consciousness is a challenge for peo-

ple working in marketing communications. In 2019 too, WAMGROUP® companies will have a presence at approximately 60 exhibitions worldwide. Some of these shows are considered corporate events, which require the presence of international booth staff. Whether it is a corporate or local event, the stand layout always follows common graphic guidelines supervised by Corporate Communications.



Water-Tech, Sofia, Bulgaria



WAMGROUP
AgroFarm, Moscow, Russia



BAUMA, Munich, Germany



Egypt-Projects, Cairo, Egypt



IFAT Eurasia, Istanbul, Turkey

WAMGROUP® GLOBAL FINANCE WORKSHOP

Ponte Motta, Italy, April 2019

More than 50 participants—35 of whom from abroad—joined the second Global Finance Workshop at the WAMGROUP® headquarters in Ponte Motta last April. Eight years after the first event of its kind, the Corporate Finance Department had prepared a wide range of topics. Sharing information of corporate activities with accountants from the Group's subsidiaries was the common thread for each presentation. Following that of the Corporate Treasury Department, financial reporting, money collection, and global and local legal assistance



Workshop participants in the "Sala Leonardo" at the WAMGROUP® Technology Centre

were the main topics presented by corporate staff members. On day 2, it was the turn of corporate fees, real estate investments, international insurance programmes, the Consolidated Financial Statement, as well as both global and local Human Resources policies.

Cyber security and intellectual property were among the standout topics, as was the impact of political

sanctions on the Group's business.

In addition to the seminar topics, team building was an important goal of the event. Before leaving for sightseeing to Verona, a band made up of corporate employees gave a surprise karaoke live concert, which was highly appreciated by everyone—an event to remember.

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NEXT ISSUE PREVIEW

Hardly any city in the world can boast a backdrop like Chile's capital, Santiago. Once the winter mist has cleared away, the metropolis unveils the spectacular range of the southern Andes at close range from the urban centre. With an elevation of 5,434 metres, Cerro El Plomo is the highest peak visible from downtown Santiago on a clear day. A recent report ranked Chile as being the most competitive country in Latin America, well above Brazil, Mexico, and Argentina (source: SOCIAL PROGRESS INDEX 2015).

Read more about WAM in Chile in the next issue.



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