

Company magazine of the **JOEST group**.

#01 2019







New shareholders

GERMANY. Just in time for the 100th anniversary of the JOEST group (Duelmen) there is a change in ownership.

"JOEST has been on the road to success for years and now we are setting the course for the future at the shareholders level as well."

Beginning of July Dr. Marcus Wirtz becomes Managing Partner in the JOEST group besides Dr. Hans Moormann. Dr. Hans Moormann remains chairman of the board who holds this position since 1999.

"JOEST has been on the road to success for years and now we are setting the course for the future at the shareholders level as well." I am delighted that Dr. Marcus Wirtz, a long-term Managing Director of the JOEST family, is getting partner", Dr. Hans Moormann comments on the new constellation.

Dr. Marcus Wirtz continues his career in the company: the 49-year-old started at JOEST in 2006. He established JOEST Inc. together with the german based in Chicago, USA and grew this company to a major market player in the United States. With his return to Germany, he took over the position of Vice President Sales of the JOEST group in Duelmen. Three years later, he was promoted to the position of Managing Director. He followed the footsteps of Dr. Christian Fuchs, who held this position for many years.

Now Dr. Marcus Wirtz is Managing Partner alongside of Dr. Hans Moormann - the next generation change at JOEST can come.

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Merry Christmas

AND A HAPPY NEW YEAR









The year 2019

Dear clients, Dear employees,

We wish you and your families a peaceful holiday season and are looking forward to continuing the trustful collaboration in 2020.

The discussion about the future perspective and innovative capabilities of the automobile industry that started in the 2. Half of 2018, weighed on the economic situation in Germany.

However, the international subsidiaries of the JOEST group recorded a pleasing order income and promising projects for 2019. Numerous of these projects could be won during the year 2019, justifying a conservatively optimistic outlook for 2020 for all international subsidiaries.

High labour agreements lacking sense of proportion given the economic situation, worldwide trade conflicts and increasing geopolitical tensions compromise the otherwise well-known optimism for the German site.

Due to our organisational structure, we are convinced that we can react to these special challenges together with our employees.

Despite all uncertainty, we gained confidence and motivation for a positive outlook during our 100 year anniversary which we celebrated with all our employees.

We thank our employees for their efforts and our clients and partners for the close cooperation during the past year.

We wish you and your families a peaceful holiday season and are looking forward to continuing the trustful collaboration in 2020.

Dr. Hans Moormann,
Dr. Marcus Wirtz

JOST imes



JOEST extends its product range

GERMANY. JOEST took over Dr. Ing. Gössling Maschinenfabrik GmbH, a specialist in conveying, processing and automation technology.









"The acquisition is a win-win", states Dr. Marcus
Wirtz, Managing Partner
of the JOEST group. "We
profit from a form fitted
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portfolio and the company
Dr. Ing. Gössling and its
employees profit from a
stable base and a
promising future."

Dr. Marcus Wirtz

As of October 1st 2019, 100% of Dr. Ing. Gössling Maschinenfabrik GmbH in Schermbeck and Everswinkel and all shares of Goessling Inc. in Tennessee, USA officially belong to JOEST.

"The acquisition is a win-win", states Dr. Marcus Wirtz, Managing Partner of the JOEST group. "We profit from a form fitted addition to our product portfolio and the company Dr. Ing. Gössling and its employees profit from a stable base and a promising future."

JOEST will continue to run Dr. Ing. Gössling Maschinenfabrik GmbH as an independent Company at its current location. The team from Duelmen is taking over the nearly 100 employees and the entire real estate. With this acquisition, the JOEST group now has over 850 employees worldwide. Dr. Gössling Maschinenfabrik GmbH has almost 50 years of experience in engineering, manufacturing and commissioning of machines and plants. Owner and founder Dr. Ing. Manfred Gössling developed it from a small company for conveying technology for drop forges and foundries to an internationally well-known specialist.

Many machine applications overlap with those of the JOEST group, allowing the know-how and activities to complement each other.

First and foremost, the variety in conveying technology for big industries is enlarged. Products like Hinged Belt Hopper -, Hinged Steel Plate - and Magnetic- Conveyors extend the product range.

The JOEST group can now offer complete system solutions to customers in the metalworking industry to an even greater extent. This includes screw manufacturers and stamping plants.

The JOEST group portfolio experiences a reasonable expansion in the areas of process engineering and automation through the acquisition of Dr. Ing. Gössling Maschinenfabrik. Last but not least, Dr. Ing. Gössling Maschinenfabrik has a subsidiary in the USA with modern manufacturing equipment and assembly plant. The acquisition also strengthens the JOEST group in its position on this strategically important continent.

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Good vibrations – a century of JOEST



GERMANY. Machine manufacturer from Duelmen, Germany celebrates 100th anniversary with big ceremony in the Messe und Congress Centrum Halle Muensterland.

2019

Big ceremony

in the Messe und

Congress Centrum

Halle Muensterland

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From a repair shop to a global player

Giant Screens, Vibrating Troughs, multi-story Spiral Elevators: When conveying, screening, and sifting of bulk materials is needed, JOEST from Duelmen is called for as a specialist from all over the world. A success, that was not yet foreseeable when the company was founded 100 years ago. JOEST started out as a simple repair shop for explosion resistant electric motors, such as those used in the mining industry. Alongside the coal production in the Ruhrgebiet, the family business also constantly evolved. In the 50s, JOEST delivered the first machines that used vibratory motors. A milestone that turned out to be significant for the company's future. This way, the company from Duelmen made themselves independent from Mining and opened themselves up to numerous other industries.

More than 750 employees on 5 continents

Not just coal from the Ruhrgebiet - more and more raw materials around the world were processed with JOEST machines from Duelmen. Foundries, steel mills, smelters, quarries and gold mines, but also pharmaceutical companies, the food and the recycling industry rely on the machines and system solutions from Duelmen. To make this possible, more than 380 employees work at the headquarters in Westphalia, Germany alone. Worldwide, there are an additional 400 employees at 9 subsidiaries that ensure close connection with customers around the globe.

However, the success story of this company doesn't lack crises either. By the end of the 90s, JOEST faces rough terrain. A new Managing Partner, Dr. Hans Moormann takes over the wheel. By consistently following a strategy of restructuring and globalizing, JOEST manages to get back on track. Today, on its 100. birthday, JOEST experiences a change in the top management once again: As of July, Dr. Marcus Wirtz becomes a Managing Partner alongside Dr. Hans Moormann.

Big celebration

at the Messe und Congress Centrum Halle Muensterland. For its anniversary celebration on July 6, JOEST presented an entertaining gala show featuring prominent acts. The evening was accompanied by the ZDF (German TV-chan-



JOEST was founded in

1919.

An anniversary that

JOEST celebrated

with a big gala for all

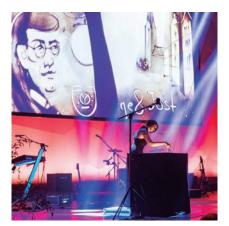
employees.

nel) host Barbara Hahlweg. Some 600 guests – employees with their partners from Germany and all over the world – enjoyed an evening full of talk, theatre, acrobatics, comedy and spectacular performances of 100 years JOEST history.

The sand artist Irina Titova portrayed the company's chronicle in sand pictures. Her act took the guests on a time travel through JOEST's history. The trapeze artist and aerialist Mareike Koch exited the audience with breath taking stunts filled with poesy and dynamic. One of the highlights was Lisa Feller. In combination with the Improtheatre "Placebo" the well-known comedian created a lot of laughter with her spontaneous and quick-witted jokes. Musical entertainment was provided by the band Miss Kavila.









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The "new" OSCILLA generation - continuing the story of success

GERMANY. On its 100th anniversary, JOEST presents a Flip-Flow update with minimal maintenance and less installation effort.

xtremely demanding applications with wet or inhomogeneous materials are screened with the Flip-Flow Screen by JOEST. The 2019 OSCILLA generation has been optimized even further with innovative solutions regarding Opex and Capex.

Operation

The OSCILLA Technology is based on that of a resonant system in which the dynamic screen frame is excited relatively to the body of the screen as a reaction to the directly excited screen body. The body of the screen itself is brought into oscillation by a standard unbalance motor or accordingly by a single or double shaft drive. As a consequence, the dynamic frame performs a linear motion relative to the screen body. The clamped screen mats are attached to the dynamic frame and the screen body via crossbars. As a result of the relative motion of the two systems, the mats are stressed and relaxed. The process is comparable to the effect on a trampoline. This way the particles are accelerated by up to 50 G and the screen mats do not clog.

Application

OOSCILLA Flip-Flow Screens are suitable for the use in the Primary and Secondary Raw Materials industries. The OSCILLA screen is applied in the processing of household and industrial waste, shredder fractions, compost, wood, surrogate fuel, natural stones, ores, minerals and coal. The Flip-Flow Screens are ideal for bulk materials that are hard to screen due to their particle shape, inhomogeneous nature or have a high moisture content. Broken bottle glass is a typical material and contains varying amounts of organic material depending on the country and region. The inlet particle size of an OSCILLA Flip-Flow Screen typically lies between 0 -80 mm depending on the material's bulk density.

Advantages

The JOEST engineers designed the attachment of the screen mats to the cross bars with a special focus on maintenance friendliness: changing the mats is simple and quick. This long proven JOEST design is ideal even for applica-









tions with extremely high acceleration values. Additionally, the screening mats are installed very high up at the end of the cross bars to ensure an optimal sealing to the sides while simultaneously ensuring a maximal effective width. The combination of operational safety and efficiency of the useable classifying surface is another JOEST feature.

A big advantage of the OSCILLA Flip-Flow Screen is the high flexibility with the optional JOEST stroke control. The stroke is measured and combined with a frequency converter. That way the relative motion between the dynamic frame and the screen body can be held at a set value.

Especially for machines that are located in an environment with extreme temperature variations, an automatic stroke control enables additional operational safety. The high flexibility is another advantage of a controlled Flip-Flow Screen. Feeding materials with different characteristics (e.g. variations in moisture content due to weather) can be processed by the same device by changing the machine's parameters.

The "new" OSCILLA

The 2019 generation of the JOEST OSCILLA comes with the usual JOEST quality made in Germany. From a design point of view, the first thing that stands out are the Vibroblocks. These are loca-





A big advantage of the OSCILLA Flip-Flow Screen is the high flexibility with the optional JOEST stroke control.

ted between the dynamic frame and the body of the screen. They absorb or pass on the system's resonant forces. This was JOEST's answer to client's request to come up with a robust, simple and cost efficient solution. The Vibroblocks are tested, long living and minimally sensitive to temperature variations. In case they must be change anyway, JOEST's engineers payed great attention to their easy accessibility and quick service. This is reflected not only in case of services by minimal down times but also in the final assembly of the OSCILLA.



Just in time for its 100th anniversary, JOEST is happy to present its clients with an even more reliable Flip-Flow Screen and is hoping for a successful sales start of the "new" OSCILLA.

Another innovation by JOEST in terms of manufacturing can be found in the design of the cross members. These are no longer manufactured individually for each machine type. Instead, they consist of specially developed profiles that simply have to be cut to length and fitted with a standard end-plate. Even the attachment points for the Flip-Flow Screen Mats are integrated. This way, the labour intensive alignment and bolting on of the individual parts to the cross members are eliminated.

By leaving out parts on the cross bars there are now also less parts in the material flow that offer potential for wear or material sticking to them. Vibroblocks and cross bar innovations: cost-synergies that JOEST gladly passes on to its clients.

The "new" OSCILLA will be available in the known sizes from 600mm to 2400mm in width and a length of up to 9200mm with an option of a single or multiple deck Flip-Flow Screen. In combination with conventional screen plates

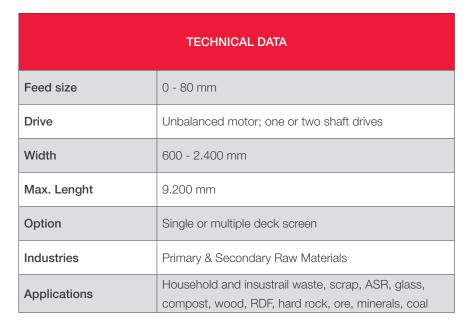
in the upper deck, you can get the best of both screening worlds in one application. Furthermore, with the modular design, numerous inlets and outlets can be attached without changing the base construction. For the most part the Flip-Flow screen avoids welding seams. Instead it uses bolts to permanently and securely connect its parts with each other.







The newest product development by JOEST intends to secure the OSCILLA Flip-Flow Screen's long-life cycle and minimize services. Just in time for its 100th anniversary, JOEST is happy to present its clients with an even more reliable Flip-Flow Screen and is hoping for a successful sales start of the "new" OSCILLA.







JOSTimes #

Once again, JOEST convinces with absolute cleanness.

GERMANY. High purity plastic for electric cables conveyed by JOEST feeder.





The first machine is in place and operational since 2013.

The second tube-type feeder was delivered in May 2019. This case proves once again, that JOEST is capable of consistently satisfying its clients, even when the demands are extremely high.

The challenge in building such a machine is the extremely high demand towards the surface quality and overall cleanness of all of the components. Foreign particles could lead to imperfections in the cables. These can result in short circuits during operation.

To meet these demands, JOEST developed a 2.40m unbalanced, free oscillator with an electromagnetic drive, that is built using solely stainless steel. To achieve a surface quality of ra < 0.2 μ m, the machine was sanded and electro polished.

The delivered materials passed a very strict reception inspection using spectrometry. A spectrometry checks the material's structure and quality of composition. At the end of the production, the pureness is inspected using a tape

test. During a tape test, adhesive strips are attached and removed from the machine. Afterwards, the samples are examined under a microscope in search for dirt particles.

In order to maintain the demanded cleanness for the tape test, the tube is stored in a special room, equipped with a filter system that guarantees a particle free environment. The machine is shipped in a particular stainless steel frame with an appropriate packaging, since transportation is not technically feasible on wooden pallets, due to the clean-room technology.

This case proves once again, that JOEST is capable of consistently satisfying its clients, even when the demands are extremely high.



The challenge in building such a machine is the extremely high demand towards the surface quality ...

For the second time, JOEST built a highly pure tube-type feeder for plastic pellets, which are used as base material in the production of electric cables.

Installation of the first JOEST drying plant for diatomite.

AUSTRALIA. JOEST assists in the assembly of a complete drying plant with classification for an Australian agricultural company.



2 Mrd. m³ storage facility

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In 2017, JOEST sold a drying plant with downstream classification to an Australian agricultural company, which owns a storage facility for diatomite in excess of 2 billion cubic meters and processes it for use in agriculture. Diatomite consists of shells of fossil diatoms with a very porous structure. The main component of the shells is amorphous silicon dioxide SiO2.

For use, the product must be brought into a form suitable for agriculture. This requires, among others, a granulation with addition of water followed by drying in a JOEST drying plant. The granules are dried to the water content required depending on the type of product in two

vibrating fluid bed dryers connected in series with a total flow area of 44 m². The system supplied by JOEST included, in addition to the vibrating fluid bed dryers, the complete ventilation equipment with fans, hot air generators, exhaust air purification and heat recovery. The electrical equipment (MCC and PLC part) is also included in the scope of delivery. A JOEST linear vibrating screen (double-decker) for the screening of coarse and fine material before packing/loading completes the scope of delivery.

The installation of the scope of delivery was assisted by JOEST technical staff. A particular challenge was posed by the local electrical standards which, among other, require a special design of the



Die Inbetriebnahme der gesamten Anlage war im ersten Quartal von 2019 und der Produktionsbeginn im zweiten Quartal 2019.

control cabinets. Special attention had to be paid to the climatic conditions at the installation site.

The design of this drying plant showed once again that JOEST does not shy away from any challenges to reach a successful end result.









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Top Quality with JOEST Classification System



AUSTRIA. Three JOEST zigzag separators delivered to SKAPA in Austria last year.





In July 2018 JOEST was commissioned by the company SKAPA Recycling to deliver three zigzag separators. Their task is to separate light materials from heavy materials to produce a pure aluminum can fraction.

Since it was commissioned in mid-2018, the system has been running perfectly and delivering end products with top quality.

The separator feed material has a grain size of 0–70/80 mm and consists mainly of shredded aluminum cans and contaminant materials. Among the heavy contaminant materials are rocks and bulky nonferrous metals such as brass, copper, and stainless steel. The light contaminants include film, lint, dust, and empty juice boxes.

The task of the first separator consists in separating out light contaminant materials such as lint, film, dust, and empty dog/cat food pouches. For the custo-

mer, it was extremely important for the latter to also be separated out by the JOEST zigzag separators.

This is not easy because they are made of an aluminum-PET film composite and hence the weight difference between them and the desired material is very small.

The two other separators intend to separate out heavy contaminant materials such as bulky nonferrous metals and any rocks if present.

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CEO of SKAPA

"We are impressed that JOEST was able to find and implement such precise solutions for our material."

To achieve a perfect sorting result with clean aluminum can fractions to be obtained, the material is screened at 30 mm and each fraction is fed into another JOEST zigzag separator for heavy contaminant removal.

The fact that even aluminum tubes containing residue such as mustard can be sorted out thanks to the innovative JOEST technology is particularly pleasing.

JOEST zigzag separators also feature post classification stages for the upper part of the separation channel with which heavy parts in the light stream can be fed back into the heavy stream.

"We are impressed that JOEST was able to find and implement such precise solutions for our material," says Anton Skalnik, CEO of SKAPA.



Usually, dross consists of approximately 40-60% metal and 60-40% oxide. The objective of such a plant is to separate the metal from the oxide, to retrieve the metal as pure as possible and to dispose the oxide as waste. The oxide portion is also referred to as slag or dross.

Dross recycling with JOEST technology

POLAND. JOEST builds plant with specially developed ball mills to process aluminum dross.



JOEST received an order, to build a processing plant for aluminum dross to be delivered by the end of 2019. The client from Krakau, Poland is a leading supplier of aluminum alloy in fluid form.

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The client is a secondary aluminum smelter mainly delivering fluid aluminum in big, thermally insolated containers with a temperature loss of only 10°C/h, for the automobile industry. The aluminum alloy arrives ready to be casted. Secondary aluminum consists of recycled material such as scrap metal, swarf, wheel rims and recycled material from the founding process. The client has an annual production of approximately 200,000t of aluminum.

The developed dual lane plant is capable of processing 2.1m³ of dross per hour. The bulk density of aluminum dross is

1.4 t/m³. It is fed by front loaders, which discharge the metal portion in a container. The core of the machine are two specially developed JOEST ball mills.

The main difference to other plant designs is that on the one hand, the degree of purity of the aluminum is very high. Depending on the set value, it lies between 90-97%. On the other hand, the duration of treatment for one batch (the machine operates in batches) is regulated automatically by a closed control loop.

JOEST is looking forward to a successful business relationship and is eager to take on new challenges in the field of processing plants for all sorts of bulk material.

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"As a qualified partner in customized machinery manufacturing, JOEST is prepared for every challenge and eagerly awaits your cases of application."

JOEST delivers special vibration table for German stainless-steel producer

GERMANY. Special design for compacting powder metal.



For this assignment, JOEST designed

a compaction table measuring 1800 x 1800, with a deck load of 12 t and an adjustable oscillation frequency of up to 33 Hz. The table consists of a solid, 200mm thick steel plate with T-notches.

The compaction table compacts the powder metal to enable the production of high density hard-metal-briquetting-rings. These are produced using the HIP process (Hot-Isostatic Press).

The powder metal and additional moulded parts are placed in a mould to be compacted. The mould is deformable, yet air-tight and ring shaped and is made of a thin metal sheet. Afterwards, the mould is set in an air-tight oven, pressurized with up to 200 Mpa (2000bar) by a cover gas. With temperatures up to 2000°C, this is where the sintering process takes place.

The large gearwheel-diameter of the standard JR 1000 had an inadmissible circumferential-speed at 2000 1/min. Therefore, JOEST implemented a modified JR 1000 without gearwheels, but with oil slingers. The deadweight of the

machine is 8.8 t. The vertical direction of oscillation is achieved by the alternatingly restricted placement of the flyweights. This direction is overlain by a horizontal, circular oscillation (in the same way as a Spiral Elevator). The very hard briquetting-rings that are manufactured using this process feature an extremely high density and possess isotropic characteristics, which means that their physical properties are the same in every space axis.

As a qualified partner in customized machinery manufacturing, JOEST is prepared for every challenge and eagerly awaits your cases of application.

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Cast iron sewer parts are cooled on 27 meter casting cooler

POLAND. Cast iron parts are cooled from 550°C to 80°C on a vibrating machine.



27_m long casting cooler

A client from Poland placed an order with JOEST to manufacture a casting cooler for cast iron sewer parts. In the 27 meter long and 3.2 meter wide machine, the parts are cooled from max. 550°C to 80-100°C.

The effective machine surface area of 27x3.2 meters, is necessary, to ensure a sufficient area of contact between the cast iron parts and the cooling air. This is thermodynamically required for the intended heat exchange to be effective.

The challenge in manufacturing this 40 ton casting cooler was the very limited height available by the client, due to the existing space in his plant.

The parts come from two separate moulding lines – a horizontally divided flask mould line and a vertically divided flask less mould line. The conveying principle is based on a low-frequency, near resonance, vibration. Thus, only a very small drive power is needed.

The 22kW drive is located in the middle of the machine. In effect of the low-frequency vibrations and the resulting low acceleration, the parts are conveyed gently and quietly.

The principle of this cooling rests on the convective heat exchange between the cast and the air in a counter flow. This process features the highest cooling efficiency.



To allow for thermal expansion, the trough is divided into multiple sections which are screwed onto the trough frame in a flexible design. The air- and dust-tight hood is screwed to the trough.

In order to minimize the transmission of vibrations into the base, the machine includes an active compensation technology using vibration dampers.

The casting cooler was delivered to the client in Mai 2019 and will be commissioned later this year.

JOEST casting coolers are successfully used in the foundry industry for decades. Find the best possible solution for your application with JOEST-Technology.

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JOEST presented its newest innovations at the GIFA 2019!

GERMANY. Visitors had the chance to convince themselves of the JOEST technology at the worldwide leading trade show for foundry technology.



As a team with the in-house brand DIETERLE®, JOEST GmbH + Co. KG once again presented its products at the GIFA.

Some 72,500 visitors from 118 different countries were welcomed at the five day trade show from the 24-29. June. Several innovative exhibits drew the attention of the visitors to the 150 m² JOEST stand.

Alongside a shakeout, a Vibrating Trough Type Feeder and a Compaction Table, JOEST displayed a Pre-Reclaiming Sand Attrition Unit and a Sand Lump Attrition Unit. Additionally, visitors could observe a combination of a JOEST®

Spiral Cooler, Small Dosing Feeders and a DIETERLE® lifting and tipping device.

Interesting conversations about individual problems in the Foundry Industry took place at the JOEST stand. Many potential clients learned all about the product folio and found ideal solutions for their individual problems with JOEST and DIETERLE® machines. The expert discussions and the forging of new contacts benefited from the excellent atmosphere at the stand. JOEST is very satisfied with the number of visitors and is looking forward to future orders and long lasting business relationships.

















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POWTECH

GERMANY. For the first time, the in-house brand DIETERLE® reinforces the trade show stand.

Exiting exhibits attracted many visitors to the 72 m² JOEST stand at the POWTECH 2019. Between the 9. And 11. Of April, the company could present its newest innovations.

A closed loop displayed the lifting, tilting, conveying, and screening of a bulk material from the food industry. The MUC-KI® lifting and tilting device is part of a series of DIETERLE® machines and fascinated many visitors in hall 1, with a height of 4.5 meters.

Additionally, JOEST displayed a vibrating Fluidized Bed Dryer that lead many interested clients into a conversation.

The interaction of JOEST and DIETER-LE® appealed to many visitors from various areas, since the different areas of application in the product line can be combined individually.

As in the past few years, JOEST could record successful numbers of visitors and can now approach new orders with great motivation. It is proven again, that personal contact is the best foundation for picking up and maintaining business relationships.

The company JOEST wants to thank all trade show visitors for a successful trade show and nice conversations and is looking forward to being a part of the POWTECH next year.

HAGI represents JOEST on the Raw-Material Processing Seminar 2019 in Leoben

From January 24 to 25, 2019, the "Bergmännischer Verband Österreich" once again organized a Raw-Mineral Processing Seminar, where many companies from various industries presented their machine and plant solutions. At the Montanuniversität in Leoben, experiences and innovations of the participants were exchanged during lectures and trade exhibitions.

JOEST was represented by the company HAGI GmbH, which is a partner of JOEST in Austria for many years.



Letsrecycle Live

GREAT BRITAIN. From the 22.-23. Of May 2019, JOEST and PRM Waste Systems exhibited in Stoneleigh.



Alongside nearly 200 other exhibitors, the JOEST representation PRM Waste Solutions presented various recycling solutions.

The JOEST export manager supported the PRM team in sales conversations surrounding recycling. This trade show was an ideal opportunity to give interested visitors an understanding of the JOEST technology.

The latest JOEST system solutions con-

vinced trade show visitors just as much as the well-established sorting and screening machines did. The personal conversations resulted in many new contacts that will be the foundation of future business relationships.

JOEST is proud to contribute to a cleaner environment with its recycling machines and is looking forward to further recycling trade shows.

IARC

AUSTRIA. At the IARC, JOEST presented the new, patented RecoverMax® system.

From the 20. - 22.03.2019, the IARC (International Automobile Recycling Congress) took place in the Marriott Hotel in Wien. For three days, over 220 participants form 25 countries discussed the newest trends of the industry concerning the economical recycling of discarded vehicles. In addition to the 24 presentations and a following panel discussion, there was a trade show with 21 exhibitors.

Here, JOEST presented the new RecoverMax® System alongside the well proven Zig Zag Seperator. The Reco-



verMax® system recovers nonferrous metals from the fine ASR-fraction (Automobile Shredder Residue) in an energy efficient matter.

The patented system was presented to the interested business professionals by JOEST'S export manager and Austrian agent from the company HAGI. Therefore, the annual congress was an attractive opportunity for JOEST to promote the rollout of the RecoverMax® in Europe.

Since no other market is currently experiencing such radical changes as the automobile sector, there was a broad spectrum of topics. The focus lied on electro mobility, the resulting challenges of transporting and recycling Lithium-lon batteries, and the sorting and classification of scrap from the Automobile-Shredder-Fraction.

At the congress, the vast amount of interest in future orientated solutions for processing Automobile-Shredder scrap was confirmed once again. JOEST is happy to contribute to an efficient circular economy with the RecoverMax® system.

JOEST at SYMPHOS trade show in Morocco.

MOROKKO. In Ben Guerir, Morocco JMPV France presented its latest solutions for the fertilizer industry.





Starting on October 7th, JOEST Manutation Par Vibration exhibited at the Congress Center of the Mohammed VI Polytechnic University, for three days.

Professionals from all over the world came to the trade show to exchange current news in the fertilizer industry.

JOEST drew the visitor's attention to large Screens for various applications. It became obvious to the visitors, that there are no limits concerning the size of JOEST machines. Their excitement about the innovative JOEST solutions was a frequent conversation starter.

The booth had many visitors and JMPV is looking forward to the subsequent conversations in the upcoming weeks. JOEST thanks all visitors for making the show a full success.

JOST imes

JOEST displays at VRAC TECH in Le Mans, France.

FRANCE. The French subsidiary of the JOEST group was once again an exhibitor at VRAC TECH to present the latest innovations and solutions to visitors of the trade show.



JOEST says
thank you to all of
the visitors of the
trade show and is
looking forward to
exhibit at VRAC TECH
again next year.

From 1.-3. October, one of JOEST Manutation Par Vibration's main attractions was a circuit consisting of JOEST and DIETERLE® machines.

A DIETERLE® lifting and tipping device, a JOEST spiral feeder and two JOEST dosing feeders showed the lifting, tipping and conveying of bulk materials.

Above all, it highlighted the bandwidth of JOEST's product line and the interaction with DIETERLE® machines.

The circuit was able to draw the attention of many visitors and led to numerous interesting conversations.

Just as last year, JOEST MPV had many visitors at the booth and is now looking forward to the follow ups. VRAC TECH has shown once again how big the interest in JOEST's product line and complete solutions is.

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AT Mineral Processing Europe interviews Dr. Marcus Wirtz

GERMANY. Interview with Dr. Marcus Wirtz, Managing Partner at JOEST Group, on the company's 100 years of history, and what role talent for innovation has played in it.

www.at-minerals.com





AT MINERAL PROCESSING: JOEST is celebrating one hundred years of its existence this year. Have innovative flair and the continuous search for new solutions contributed to your company being able to look back on a long and successful corporate history?

DR. MARCUS WIRTZ: The continuity with which we have established and expanded our portfolio has without doubt played an important part. Continuous growth and further development, and concentration on core topics – all of these are significant factors that have made JOEST the globally known company that it is today.

Our customers' expectations have, of course, also changed in the course of time – the trend is toward ever larger machines, and mechanical screens are also getting bigger and bigger. We

also built our largest mechanical screen - with a width of 5 m - in a double-deck version. Our main markets - Australia, the USA, Canada and South Africa also exert a great influence, of course. And the great competence of our engineers naturally also plays an important role - we have built them up in the individual national agencies, and they are not only masters of vibratory technology, but also of the upstream and downstream process stages. A good example of this is crusher systems: we do not manufacture these ourselves, but we do have to understandwhat happens in a crusher, what materials crushers need and what material comes out of a crusher.

AT MINERAL PROCESSING: To what sectors are these large mechanical screens supplied?



DR. MARCUS WIRTZ: Above all, to the iron ore sector, and all sectors that process hard rock and minerals: gold ores, copper ores, lithium ores – we are very strong in these areas. In Australia we supply major mines involved in the getting of mineral resources using mining methods.

AT MINERAL PROCESSING: How has it been possible to assure, across such a long period of time, that the company and its employees maintains this spirit of innovation and such receptiveness to continuous further development? Does this originate from management or from the employees ... how can this be secured across such a long time?

DR. MARCUS WIRTZ: This always starts in our heads, ultimately all the threads must converge at central office,

at headquarters. But just as important are the individual subsidiaries around the world, which are situated very close to the customer and have a feeling for exactly what the customers, and what the markets need right now. This is why we systematically develop subsidiaries around the globe. And the qualifications of our employees are, of course, also very important. Our staff always come from the market, i.e., from the industries themselves, such as mining engineers, for example, people who have grown up in mining. And the impulses for our further development also always come from our markets.

AT MINERAL PROCESSING: One hundred years is a very respectable age for any company – how has JOEST evolved into what it is today, what were the most important milestones?

DR. MARCUS WIRTZ: The first important factor is that we are a family- and owner-managed company. This enables us to ensure fast decision-making routes and spontaneity. But it is also possible to take entrepreneurial risks, and have the courage to develop further and position oneself internationally. This has put our company ahead for a hundred years. That was not always possible without setbacks, of course. But these can be overcome provided there is support from the company. The most important milestones have been continuous growth and acquisitions. During the past twenty years our develop ment has been definitively shaped by internationalisation, i.e., the setting up of subsidiaries and, in parallel, the acquisition of companies with technologies that complement our own.

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AT MINERAL PROCESSING: How do you make sure that you retain a feeling for where the market is heading and what that market needs – does JOEST lead here, or does the company only react to market requirements?

DR. MARCUS WIRTZ: No, proactive discussions with our customers are extremely important. This means that we have to have a presence, with qualified employees in the individual regions. We have highly competent managing directors in our subsidiaries, it is important here, above all, to also take account of special regional features. South America, for example, is different to Europe. Totally different structures. Listening is extremely important in this context, in order then to start being creative and power up development. Here at our main location in Germany, we have our own development department, which then incorporates the corresponding feedback into its work. At the same time, we also founded in Australia a Competence Center for mining where the flows of information coming from our main markets in the mining sector converge.

AT MINERAL PROCESSING: What are the essential focuses of machine development?

DR. MARCUS WIRTZ: Over these hundred years of development, we have established a very broad spectrum of mechanical screens for the primary and secondary sectors. These are now also equipped with smart control systems. Our range of drive technologies enables us to produce linear, circular and elliptical-motion screens. The necessary control systems are assembled in-house. And we are continuously further refining the mechanical screens themselves, the drives and the smart control systems.

For us, a "smart control system" means, for example, that the screen itself detects that the material has changed, maybe it has a higher moisture content, and is able to react immediately by changing the parameters. This is also where we see the future.

AT MINERAL PROCESSING: At the start of July 2019, you celebrated the company's 100th anniversary with the employees and their families. What makes JOEST and its employees special today?

DR. MARCUS WIRTZ: On the one hand, the fact that we have a broad positioning in the various industries, are already specialists in vibratory technology, but can also offer turnkey solutions, vibrating trough feeders, chutes and structural steel – we can do all of these. We also perform the planning, design and engineering. Our employees are the most important foundation for the company, we also offer training, and we have around thirty-five trainees each year. We also have a very great depth of production here at our location.

AT MINERAL PROCESSING: What are your visions for the future?

DR. MARCUS WIRTZ: One of our visions is a continuous process of growth – together with our customers and the markets. The decision has just been taken, for instance, to build a complete new plant in Australia, with more than

twice the previous capacity, in order to meet growing demand and be able to expand into new market segments and industries. Requirements in the primary and secondary resources sector are becoming ever greater, and we will also be able to accommodate them in the form of all-in solutions. The future is also, of course, in the field of Industry 4.0 – we already offer solutions for this, but we intend, naturally, to further evolve and expand these. Another focus is drive technology. Here the emphasis is on service-lives, energy-efficiency and reduction of noise emissions ...

AT MINERAL PROCESSING: What role will the structure of the family-managed company play in its future orientation?

DR. MARCUS WIRTZ: We have short decision-making paths, we are extremely flexible, and we are not externally controlled. We can allow ourselves long-term innovations. In terms of orientation, we are always interested in the longer-view perspectives of our development, with a focus on the future and on our customers.

AT MINERAL PROCESSING: Dr. Wirtz, many, many thanks for this informative interview!



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JOEST'S annual field-crewconference took place on the 7. and 8. Of March 2019.

The entire German
field crew met at the
Headquarters in DülmenBuldern, to present news
from the different sales
areas and to develop a
common sales strategy.



Field crew conference

GERMANY. Change of agent in field crew.

"What I will miss most, is the close collaboration with the clients!"

Volker Stößel

In the course of the conference, the management board says goodbye to employee Volker Stößel. Over 25 years, Verk.-Ing. Volker Stößel stood by for important tasks and is now going into his well-earned retirement. "What I will miss most, is the close collaboration with the clients!" says Mr. Stößel.

As his successor, JOEST welcomes Mr. Gerald Schmidt, who will take over the sales region of Hessen, Saarland and Rhineland-Pfalz as of now.

On behalf of all colleagues, JOEST thanks Mr. Stößel for the friendly and successful cooperation and wishes him the best of luck and healthiness for the future.

In Mr. Schmidt, JOEST has found a very experienced expert in processing raw materials and vibration technology. He has developed and proven his skills for over 10 years. This enabled a perfect transfer from Mr. Stößel.

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International agent conference



WORLDWIDE. GERMANY. The annual agent conference took place on the 14. and 15. of march 2019.

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agents from 10 nations met in Duelmen to exchange experiences and inform themselves about the newest innovations at the headquarters. Each agent gave a speech about the characteristics of his sales region and the chances and risks he is confronted with. Short-term measures and a medium-term strategy on handling the European region were worked on in the format of a workshop.

The first day of the conference was completed successfully with a corporate dinner.

On the second day, the sales managers of the various business areas held presentations about novelties concerning technology, clients, trends and markets.

The annual conference brings our international agents up to date on the JOEST technology. This is fundamentally important, to present clients around the world the most innovative and modern machine solutions.

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Construction design Workshop gets to know the daily routine of a product designer

In March, interested students from Senden visited JOEST for a day and got to know the job of a Product Designer/Constructing Engineer.



GERMANY. 14 students from the Joseph-Haydn Gymnasium visited JOEST for a day.

One of JOEST's former trainees told the students what it is like to become a product designer and what to expect when balancing a schedule at the company and at school.

They were welcomed by the managing director, Dr. Marcus Wirtz. After that, the class was given a tour of the company's facilities by a JOEST Construction Engineer and examined multiple machines. Authentic tests could be presented with ready-made screens and troughs.

Next, the students were shown how to use a CAD plotting program. Furthermore, they found out what the daily routine of Construction Engineers looks like, and what sorts of tasks await them.

Moreover, the class made a 3D Faro Scan of an empty warehouse with JOEST employees. These scans can measure the dimensions of a room and be used to generate a 3D model. The models are used to determine to available space for a machine.

Finally, the students had the chance to ask any unanswered questions and share their impressions.

To allow an insight into the work environment, JOEST is happy to present the various occupational areas to interested students.



JOEST trainees in motion!

GERMANY. Industrial trainees receive football table from Techniker Krankenkasse.

Since May 2019, there is a football table in the break room of the JOEST training workshop. It was a gift from the Techniker Krankenkasse (a health insurance), that had visited the company in April. In line with the company's health-management, the football table brings change and movement to the breaks. It also has teambuilding effects and removes the smartphone from being the activity of choice.

The day the football table was delivered, the future construction mechanics assembled it themselves and tried it right away. The football table has been frequently used since.

JOEST thanks the Techniker Krankenkasse for the kind gift and is looking forward to continue the friendly cooperation.

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Apprenticeship at JOEST – always a good idea

GERMANY. "JOEST paves the way into the world of work "

What does one hope for an apprenticeship?

A good career p
reparation, assistance
in school and kind
colleagues.

. It is with these aspect in mind that many high school graduates head out on a search for an apprenticeship. It was the same for me three years ago. But how can you tell if a company is just right for you when you know nothing about it? Reports written by apprentices are rarely to be found. That is exactly why I want to report to you about my last three years of apprenticeship as an industrial clerk at JOEST.

During my time at JOEST, I got the chance to see 14 different departments. That is way more than other companies can offer. The goal is to get to know your strengths and weaknesses and to work on them. Thus, at the end of your time in a department, you are given a sheet of evaluation that is filled out with the help of the head of the department. Whether

its craftsmanship in manufacturing, calculations in controlling, convincing in sales or creative in marketing – if you don't know which direction to head in your professional life, you will find out in your years at JOEST.

The Human Resources Department attends all apprentices and is always open for questions and remarks. I always felt well taken care of and my questions were always answered.

School is twice a week during your first two years. In your last year you only go once a week. "Company orientated projects" help create the connection between school and work. Within these projects you get to follow real projects at other companies as a corporate consultant.

JOEST pays great attention to fostering strengths and minimizing weaknesses. Flexible working hours, corporate parties and friendly teamwork create a good atmosphere amongst colleagues in the company. Each department works as a team and they really take time for you. I would recommend anyone to start his/her apprenticeship at JOEST.

Don't hesitate for too long - Apply now!

Theresa Müller



JOST imes

Apprenticeship at JOEST – First hand impressions

GERMANY. My experience with the JOEST Apprenticeship.

Hey there!



First of all - My name is Niklas Schultz and I am currently in the third year of my apprenticeship here at JOEST.

When I look back at the recent years, there's one thing I always think – wow that went fast! Feels like I just got out of school and now I'm already in my third year. Maybe that's because there's always something new. You basically change departments and workspaces every month.

That way, you get to know the machines and employees one by one. Crimping, welding, pre- and final assembly are the areas you spend the most time in. The same goes for tool dispense, drive manufacturing and maintenance. At the

end of the day, when finals are coming up, you focus on practicing the skills that are required for the practical and theoretical exams.

I especially like the fact that you actually go out to the clients and see the machines in action! All in all, everything is set for a successful apprenticeship. Now it's all up to you!

Niklas Schultz

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Did you know? JOEST is on social media!

As a modern employer, JOEST has its own page on LinkedIn and Facebook. Many likes and new followers help raise publicity.

Don't hesitate – network with the **JOEST** group!

Look forward to news about staff, machine solutions and the company.

On LinkedIn, we will mainly share new technology, new machine solutions and large orders. Here you will find that, JVM is featured with its own page to update you on our latest innovations in drive technology.

Our Facebook page however, will contain information on staff and other news from our company.

Posts on Instagram will focus on our current and possible future Trainees without neglecting the latest news from the JOEST group.

Feel free to share any posts to increase our range. JOEST will keep all followers posted with interesting information and references.













Safety on the JOEST terrain

From now on a defibrillator is available to employees and visitors. Safety is the top priority at JOEST! To treat a sudden cardiac infarct, JOEST has a defibrillator on the company ground since March 2019. In context of emergency preparation, the defibrillator is freely accessible and applicable by everyone.

The company JOEST is pleased to contribute another part to the general operational safety.

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