



## DELICIOUS FRUIT GUM THANKS TO JOEST DOSING FEEDER

**GERMANY.** Special dosing feeder for foodstuff delivered.



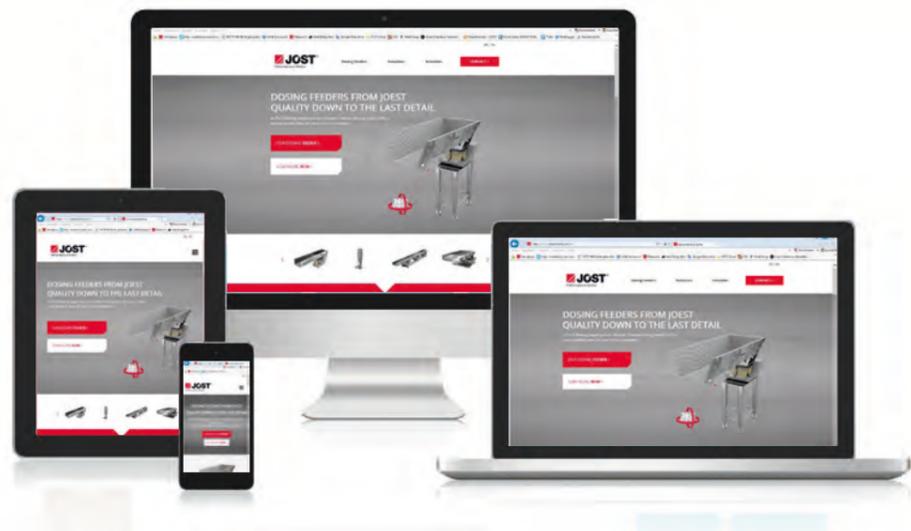
JOEST Dosing feeders are compact and powerful magnet vibration conveyors which are equipped with the proven JD Dosing Drive. The machines are particularly well suited for continuous or batch feeding of bulk materials in the chemicals, food, plastics and packaging industries.

At the beginning of the year JOEST delivered a special dosing feeder for the food industry. With a length of approx. 750 mm, the machine can dispense up to 250 kg/h of fruit gum. The feeder has been made from a very thin textured plate in order to achieve less adhesion and to facilitate the transport of the material. The dosing feeder is electro polished and suitable for food use. Due to the support made of stainless steel with adjustable feet and the maximum overlap, the customer reaches the greatest possible flexibility and range.

JOEST dosing feeders are successfully used in a variety of industries. They are not just used for dosing purposes, but also as space-saving and cost-effective conveyor units.

### NEW WEBSITE ABOUT OUR DOSING FEEDERS

[www.dosierinne.com](http://www.dosierinne.com)



Visit us at our booth - we are happy to welcome you.



POWTECH (Nuremberg)  
September 26 - 28, 2017  
Hall 1 Booth 145

# SMART FOUNDRY IN TURKEY EQUIPPED WITH JOEST MACHINES

**TURKEY.** Complete vibrating machine line arrangement.

JOEST delivered the complete vibrating machines to Trakya Dokum's new smart foundry in Turkey. The plant is designed for the production of various automotive cast iron parts in a vertical flaskless molding line. The molding line is a DISA 270A; mold dimensions 950 mm x 700 mm, operated at 400 moulds/hour, 150 t/h sand throughput in average, 12 t/h liquid metal in average with inductotherm dual track melting furnace.

After the SBC (Synchronized Belt Conveyor), the molds dump on a reversible conveyor and pass on a shakeout with adjustable frequency and adjustable vibrating angle directly. This soft handling track is for fragile parts which cannot be processed in a rotating drum.

The main track directly connects end of molding line SBC, shotblast machine, grinding area and melting shop in a straight way. After the SBC, the molds dump on a reversible conveyor and pass to a 25 m inclined linear sand/casting conveyor and a 90° curve which follows this conveyor. Conveying the parts on such a long distance together with the sand allows heat dissipation from the castings to the surrounding sand mass flow.

This conveyor arrangement is followed by a rotating drum without any grids and a shakeout with adjustable frequency and adjustable vibrating angle in order to clean the casting surface from sand, reducing sand lump size, and finally draining the dissolved sand through the grids.

After the shakeout, the castings pass on a primary sorting conveyor for removing the downsprue, runner and riser before they enter the DISA CT shotblast machine.

The shotblast machine is followed by a secondary sorting conveyor. Castings are separated from return scrap; the castings are conveyed to the grinding area and the return scrap is processed in a hydraulic V-jaw breaker in order to reduce the size. After this machine, the return scrap is conveyed directly back to the charging plant.

All unbalance motor machines are supported on two mass isolation frames; all resonance conveyors are mass compensated in order to minimize the transmission of dynamic forces in the foundry floor. All shakeouts are equipped with variable vibrating frequency and vibrating angle in order to allow best processing parameters corresponding to each individual casting.

The target of this project was the erection of a zero-compromise layout in order to avoid any kind of ineffective manual handling and fork lift handling of castings in boxes. Efficient teamwork of the innovative Trakya Dokum foundry top management and engineering department and the JOEST engineering team successfully hit this target.



# HANDLING OF IRON ORE IN A SMALL SPACE

**GERMANY.** JOEST convinced with special vibrating conveyor at cable suspension.

In the middle of June 2017 JOEST delivered two hopper discharge feeder with very high process engineering and installation requirements.

The international Mining Company is operating a plant for processing iron ore for several years. For the separation of magnetic components from the fine iron ore fraction, magnetic conveyors have been used so far for feeding the three meter wide sorting devices. These vibrating conveyors extract product controlled from an intermediate storage bin at the same time. Two process steps are handled by one machine.

The geometrical installation situation between bin and sorting device provides a 3 meter wide and only 1.4 meter long vibrating conveyor for each unit, which - also due to further stationary peripherals - must be adapted to the height of the situation. On the one hand, the machine had to be designed in such a way that it regulates the product

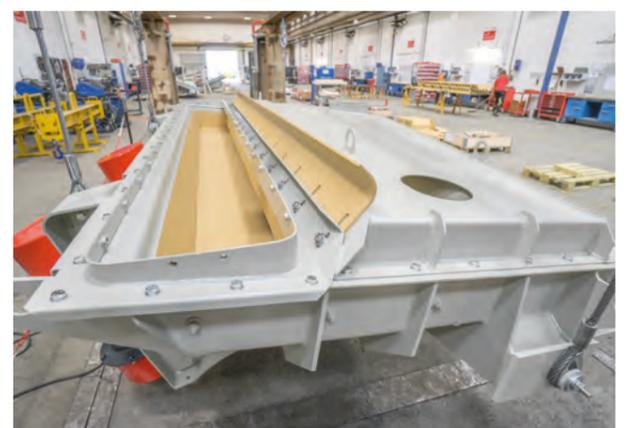
flow from the bunker, but on the other hand also with stands the head load from the bunker. In addition an even product distribution over the width with low layer thickness must be secured. These process engineering requirements in combination with the structural crowded situation showed technical problems when using the magnetic resonance conveyor technology.

JOEST was selected to design and build an individual hopper discharge feeder in massive construction. Due to the harsh conditions in this mine, a special heavy duty design was required. In this case, unbalanced motors have been used, which can be operated at variable speed in combination with a sufficient power reserve and frequency converter. The flexible use of JOEST standard components ensures high operating safety and long service life.

The machine section on the outlet side is in stainless steel because of the magnetic field. Due to the tight space requirement below the machine, the vibrating conveyor is completely displaced by cable suspensions.

The drive beam has been slightly moved backwards in order to be able to build the feeder flatter and more compact and to avoid integration problems.

Once again the JOEST team made clear that it can work out the right solution for every customer.



# INDIVIDUAL COMPLETE SYSTEM FOR FREEZE DRY FOODS

**GERMANY.** A successful partnership for the food industry.

A new and innovative complete system from the JOEST group has enabled our customer, Freeze Dry Foods in Greven, to optimally refine and process its raw goods, which include freeze-dried herbs, air-dried spices and vegetables. During the refining process, the natural products are separated from foreign components and divided into different quality levels. Freeze Dry Foods has been a leading supplier of freeze-dried and air-dried ingredients for the food processing industry for over 30 years.

Naturally, this industrial sector is subject to strict standards regarding quality and safety, which Freeze Dry Foods is able to meet thanks to its various international certifications and test seals, including IFS and FSSC. The new plant consists of a MUCKI MSH 5 swivel/hoist column made by DIETERLE, a JOEST FDL 500/-80 x 700 Dosing Feeder and a JOEST LZS 12/120 x 540 Zig Zag Air Separator. The plant has an output rate of up to 65 kg/h, whereby the bulk density of the products can be between 45 kg/m<sup>3</sup> and 150 kg/m<sup>3</sup>. The product is fed manually into a feed container, which has a flat slide and an air-tight cover, on the MUCKI MSH 5 lifting swivel column.

The transfer process is started when the ultrasonic sensor in the downstream storage container reports that the minimum filling level has been reached. The feed container is then moved into the upper position and swiveled until it is above the feed nozzle on the storage container. The protective flap above the feed station is then pivoted to the side and the feed container docked with an air-tight seal. Subsequently, both flat slides open to enable transfer of the bulk material.

Once the product has been dispensed from the feed container, the two slides close again and the feed container is undocked, swiveled back into the lifting position and lowered into the starting position. At the same time, the protective flap is swiveled back into position above the docking station. The protective

flap serves to protect the feed station from contamination while the feed container is in the lower position.

The product is removed from the storage container using an FDL 500/-80 x 700 Dosing Feeder and dosed into the Zig Zag Air Separator by means of a controllable electro-magnetic drive. During this process, a retaining flap prevents „shoot through“ of the product during initial filling of the storage container.

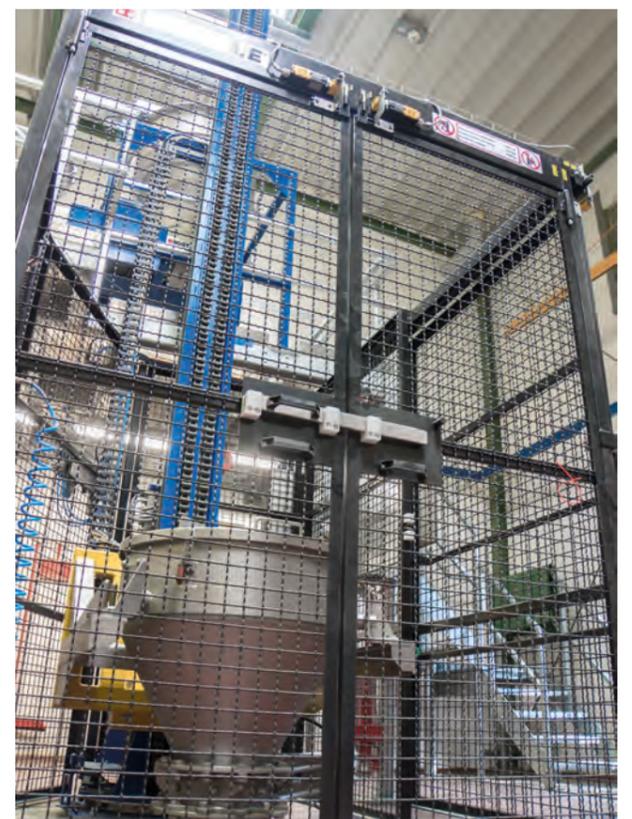
In the LZS 12/120 x 540 Zig Zag Air Separator, the product is separated into a light and a heavy fraction in several stages. The heavy fraction is discharged without pressure at the separator's base. The light fraction is discharged upwards with the air stream, separated in the high-performance cyclone and discharged there via a rotary feeder.

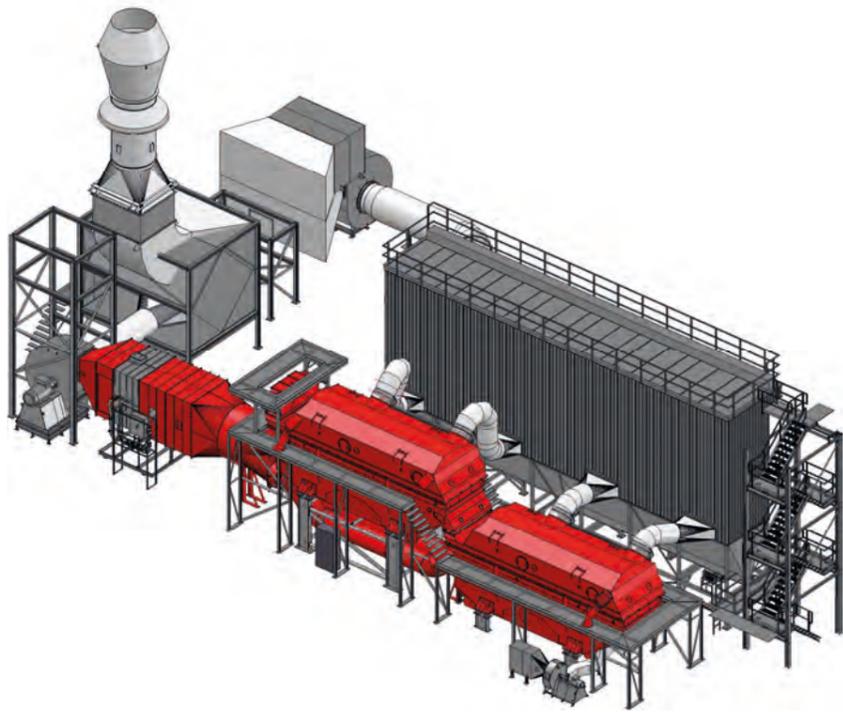
The Air Separator is mostly operated in recirculation mode. Care was taken to ensure that, in the vicinity of the heavy material outlet, there is a slight negative pressure compared to the ambient air. As a result, the material can be discharged without an additional shut-off valve and only small quantities of false air are conveyed into the customer's extraction system.

Due to the wide range of possible product parameters, the air velocity in the separating channel must be adjustable within a wide range. This was achieved by means of a speed-adjustable fan and an additional bypass line with an air regulating slide. The separation accuracy can thus be infinitely adjusted — a flow sensor detects the air velocity.

Due to the strict quality requirements in the food sector, the entire system, including the conveyor paths, had to be easy to clean. This was ensured via generous inspection openings and maintenance covers with quick-release fasteners. To ensure that the air ducts could also be cleaned easily, they were

divided several times and also equipped with quick-release fasteners. The excellent cooperation within the JOEST group guarantees the precision of all plant components. We are proud that, in this group-wide project between DIETERLE and JOEST, we were once again able to deliver outstanding results based on first-class quality, operational safety and reliability.





# DRYING OF AMORPHOUS SILICA IN AUSTRALIA

**AUSTRALIA.** JOEST delivering drying plants and screening machines to Australia Agribusiness.

Greenvale Silicon, an Australian Agricultural Business has an Amorphous Silica (Diatomite) mineral deposit of approx. 1.8 Billion tonnes, which is one of the world's largest of its kind. Greenvale Silicon approached JOEST for a solution to efficiently dry the granulated material, recover the evaporated process water and screen the granules after the drying process.

Diatomite is a mineral deposit that consist of the remains of fossilized shells of algae called fustrils. One kilogram of diatomite contains millions of the little fragments of these fustrils. The material has a high number of pores with a medium pore diameter of 0.2 – 10 µm. Water is able to infiltrate the pores and is "locked up" against the gravity due to the soil moisture tension.

The task was to take 40 t/h wet mass flow intake from a mixing unit and dry to 10 – 12 % or < 5 % moisture wet base after the dryer. The product was then to be screened at various size fractions as per the client needs. JOEST evaluated the drying properties through a series of tests, checked the process design and prepared a plant design according to the requirements of the client.

The drying plant consist two fluidized bed dryers with a width of 2.500 mm each, a length of 8.800 mm each and a complete 44 m<sup>2</sup> blower stream bottom. The machines have a thermal power of 13.000 kW and the required process air is 150.000 m<sup>3</sup>. 2.500 m<sup>2</sup> filter surface for exhaust air filter and an exhaust air heat exchanger will be installed. The additional double deck screen is 2.400 mm wide and 5.000 mm long and will separate the lumps and fines as per client needs.

In late summer 2017 the plant will be delivered to Australia. With this solution, perfectly worked out for the customers need, JOEST could once again convince through first class quality, efficient work and full reliability.

# ANGOLA'S FIRST LARGE SCALE SUGAR FACTORY

**ANGOLA.** Brazilian JOEST subsidiary successful in Southwest Africa.

Biocom in Angola successfully operates Vibrapen sugar screens from JOESTMavi. It is Angola's first large sugar factory in order to replace imported sugar and supply the local market with less expensive products. JOESTMavi was chosen as the supplier for the final pre-packaging screening equipment for its long time experience with large scale sugar factories.



# BACHELOR THESIS AT JOEST

**DUELMEN.** Five-month internship semester focusing on separator technology.

Hi, my name is Hannes Rox. I am currently studying at the University of Applied Sciences in Münster with a specialization in mechanical engineering. Having already completed a basic internship at a metalworking company, I am now delighted to be able to carry out my internship semester at JOEST. My internship semester began in March 2017 and ended in July when I submitted my Bachelor thesis.

My Bachelor thesis deals with the topic of „Flow and process analysis in a vibration separator“. At JOEST, I have the opportunity to investigate the AirVibe vibration separator, carry out tests in the technical center and analyze the process technology being used.

My supervisor, separator expert at JOEST, and the responsible colleague for the technical center primarily support me in my work. The cooperation within our team is very good, as both of my colleagues use their many years of experience to help and advise me.

I find the practical relevance of my work particularly interesting. During my studies, I was only able to develop and calculate theories and hypotheses on a theoretical basis, whereas I can now test them directly on the machine.

I have enjoyed my time at JOEST very much and would like to thank my colleagues for their support. I would also be delighted if some of the findings from my work could perhaps be put into practice.

# A TOUR OF THE FACTORY AND THE „HOME OF THE MUCKI“



**DUELLEN.** On July 7, 2017 a vocational school class of technical product designers in the second year of their apprenticeship visited the company JOEST GmbH + Co. KG to take part in a factory tour. Around 30 pupils, including three JOEST trainees, and three teachers from the Hans-Boeckler-Berufskolleg in the Muensterland region assembled in the canteen to watch a presentation about the JOEST group by our technical manager.

This gave the class some initial insights into the history, international standing and various business areas of the group. After a safety briefing by our trainee supervisor, the pupils were led around the company premises in three groups. The trainees thus learned about the various oscillating machines as well as the structure of the JVM drives manufactured by JOEST. In our technical center, they witnessed test runs of a Zig-Zag Separator and a Spiral Conveyor. The visitors' agenda also included prefabrication, mechanical production, the Dosing Feeder department and final assembly.

In the previously mentioned „Home of the MUCKI“, which belongs to DIETERLE, the upcoming product designers were able to look around and get acquainted with the JOEST group's lifting and tipping technology. The visit ended in the „Grizzly“ meeting room, where the class expressed its thanks by presenting plastic cups made by the pupils.

# 61ST AUSTRIAN CASTING EXHIBITION

**GURTEN.** Modern casting processes for the challenge of lightweight construction. According to the motto „Modern casting processes for the challenge of lightweight construction“, the 61st Austrian casting exhibition took place from 27 to 28 April 2017. This year, the venue for the event was the premises of the company Fill Gesellschaft mbH in Gurten. Numerous specialist visitors from Austria, but also from abroad, were able to find out about the topic of foundry at various specialist presentations. 25 exhibitors, including JOEST, together with its Austrian representative HAGI GmbH, also presented their product range for the foundry industry. These were very interesting days in Austria and we would like to thank Fill Gesellschaft mbH and the Austrian Foundry Institute for the organization.



# SOLIDS AND RECYCLING-TECHNIK 2017

**DORTMUND.** On May 10 and 11, JOEST participated in the SOLIDS and RECYCLING-TECHNIK trade fair in Dortmund. The almost 6800 trade fair visitors were able to obtain information on granulate, powder, bulk material and recycling technologies from nearly 500 exhibitors.

For the second time, JOEST was represented at this important trade fair and was able to hold many interesting discussions and establish contacts.

Chemical and food, mining and minerals, recycling or foundry - our broad product range allows us to meet the most diverse customer requirements and to work out and implement individual solutions together with the customer, even in the case of difficult requirements. Whether it is a single machine or a complete solution - JOEST is the right partner.

In 2018 JOEST will be represented in Dortmund again. We look forward to your visit.



# BUILDING SITE

**DUELLEN.** JOEST has started expanding and modernizing the production and storage capacities at the Dülmen site. On the property purchased in 2008 with an area of 32,000 m², large parts of the site were developed through extensive soil exchange of 15,200 m³. In a first subarea, 124 parking spaces are currently being built, as well as a combined warehouse for a high rack and delivered welded assemblies with an area of 1,500 m². The first of a total of three construction sections is expected to be completed by the end of September 2017.



## GIRL'S DAY 2017



**DUELMEN.** Girls' Day offers young girls the opportunity to gain insight into predominantly technical and manual professions for one day. The four students Gianna, Jessica, Paula and Anna from the Annette-von-Drosste-Huelshoff secondary school in Duellen and the Theodor-Heuss Junior High spent their Girl's day at JOEST GmbH + Co. KG.

After a tour of the factory premises the training manager showed them some areas of his work. Thus the girls received a first impression in the daily work of a construction mechanic. Thereafter, the four could give hand and work an aluminum plate. This included the filing, marking, graining and stamping of their name.



## STRONG SUPPORT FROM NEW TRAINEES

**DUELMEN.** JOEST welcomes six new trainees in the team.

At the beginning of August JOEST warmly welcomed six new trainees. The young colleagues will train to become industrial clerks, technical product designers and construction mechanics.

During their training, they gain deep insight into the company as well as all relevant departments and divisions.

One of the new colleagues is already familiar to the JOEST team. Sohel Shajahan from Bangladesh has already completed an internship at JOEST within the framework of the refugee initiative Buldern. During this time, he was able to convince through his commitment and his skills, so he is now trained as a construction mechanic.

„We are proud that the initiative has been successful and that we can contribute to an effective integration“, explains CEO Dr. Hans Moormann.

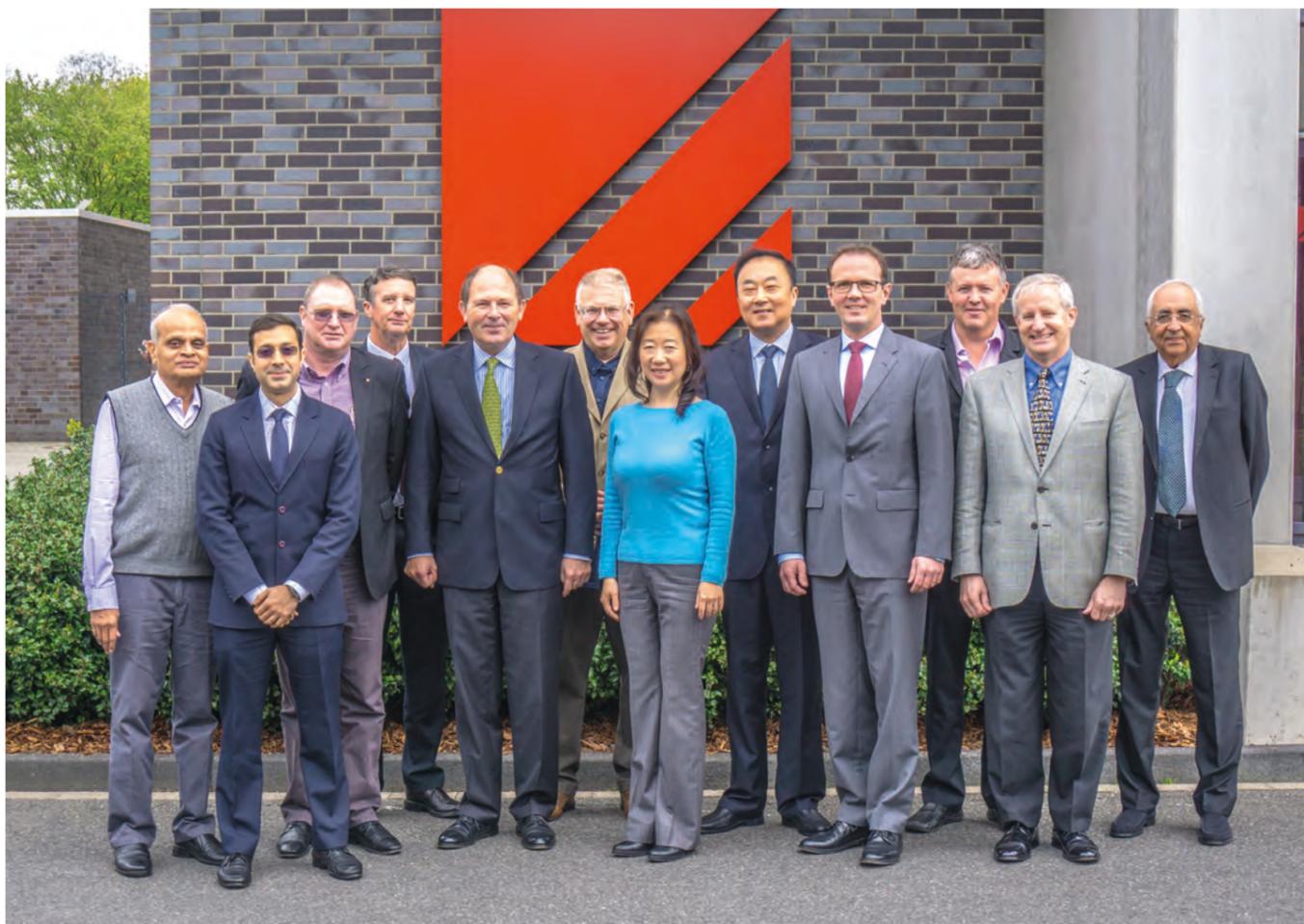
We wish all trainees a successful start into their professional life.

## ONE GROUP – ONE TEAM

**DUELMEN.** On May 3rd 2017 the General Managers of the JOEST subsidiaries met in Duellen at the Management Meeting. At this meeting important strategic topics had been discussed, incl. the planning for 2018 and following years as well as technical innovations and developments. Following this meeting, the Technical Managers of all JOEST subsidiaries around the world met at the annual Technical Management Meeting.

The focus of this meeting was the exchange of insights and innovations in the field of construction and technology.

All participants agreed that it had been very successful and interesting discussions in Duellen and the international cooperation within the worldwide operating JOEST group got even stronger and more efficient over the last years.



### Social Media



### Imprint

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