

THOUGHT-LEADER IN STEEL PROCESSING AUTOMATION

REFERENCES FOR SHOT BLASTING AND PAINTING PROJECTS



1300 262 123 / +61 8 6500 6880

tellmemore@smsales.com.au www.SMSales.com.au





KALTENBACH/GIETART SURFACE TREATMENT SYSTEMS

With a legacy spanning over a century, KALTENBACH | GIETART stands as the premier, innovative authority in steel surface treatment, providing the most dependable, high-quality shot blasting and conservation equipment. Our expertise lies in delivering top-tier solutions for cleaning steel surfaces, ensuring they are free from rust, mill scale, and impurities before processing.

The cornerstone of our approach is our high-end blasting process, wherein shot blasting is executed by propelling small metal balls or cut wire against the product at a velocity of approximately 80 m/sec. Leveraging our unique GIETART high-performance turbines, we craft the most effective blasting pattern and impact. Our systems boast a well-proven construction with a triple-layer housing, ensuring exceptional stability and a long system lifespan.

In the realm of painting technology, our systems offer maximum economy, reducing throughput times and paint consumption while minimising drying times and space requirements. Our automated painting processes lead the market, delivering continuous coating solutions for steel parts with unparalleled efficiency and precision. Our cutting-edge technology enables cost-effective, environmentally friendly solutions, characterised by precise coating techniques and limited overspray.

As part of our commitment to innovation, we now offer advanced powder coating systems in our delivery program, ensuring a long-lasting finish for your products. Additionally, our energysaving systems are integrated into every step of the shot blasting, painting, and coating process, further enhancing efficiency and sustainability.

Discover how our solutions have transformed operations in our reference projects, showcasing the reliability and effectiveness of KALTENBACH | GIETART equipment.



SPECIALIST MACHINERY SALES AUSTRALIA, NEW ZEALAND & SE ASIA



















Customer

With over 2,000 projects built in Brazil and abroad, their extensive portfolio results from continuous investment in training, research, and development. Their expertise in process integration, advanced engineering, and high-tech manufacturing enables them to offer streamlined solutions in four segments: Industrial Building (Mining, Siderurgy, Metallurgy, Cement), Commercial and Industrial Warehouses, Roofing Systems (Distribution Centers, Supermarkets), and Multi-story Buildings (Shopping Centers, Schools, Hospitals, Hotels, Commercial Offices).

They were the first Brazilian company to meet the Quality Management requirements from the American Institute of Steel Construction (AISC) in the category of Complex Steel Building Structures, demonstrating their ability to provide world-class services.

Process Description

The shot blast machine is used for the shotblasting of welded constructions which are transported to the machine from the fabrication area by overhead crane and are loaded on the roller conveyor. The constructions are then transported to the machine infeed roller conveyor.

After the shot blasting the cleaned construction is cleaned from the remaining abrasive by rotating the construction on the outfeed roller conveyor. The remaining abrasive is collected in the screw conveyor underneath the roller conveyor and returned to the shot blast machine. After the blasting the clean construction can be automatic painted on the top coating paint machine which is in line with the shotblasting machine or transported to the manual painting hall.











<u>Customer</u>

They achieve their entire production process using the latest technology in a factory covering a total area of 30,000 m², with 13,500 m² of that being enclosed. Located in Sakarya Hendek 2.OSB, their renewed technological engine park and increased automation have boosted both production quality and capacity. The factory's production capacity is 1,500 tons per month.

Process Description

The shot blast machine is used for the shotblasting of welded constructions which are transported to the machine from the fabrication area by overhead crane and are loaded on the roller conveyor. The constructions are then transported to the machine infeed roller conveyor.

After the shotblasting the cleaned construction is cleaned from the remaining abrasive by rotating the construction on the outfeed roller conveyor. The remaining abrasive is collected in the screw conveyor underneath the roller conveyor and returned to the shot blast machine.

After cleaning of the blasted construction it is offloaded by overhead crane and processed further in the manual painting area.











Customer

Located in Lier, Belgium, this company is one of Europe's leading manufacturers of buses and trailers. They produce approximately 1,400 buses and coaches, and up to 4,000 commercial vehicles annually, with 80% exported worldwide. With a workforce of over 4,000, they offer a complete range of buses for public transport in international markets, from a 9 m midi bus to a 25 m double articulated low floor bus.

Process Description

The shot blast machine is used for the shotblasting of the already welded bus or trailer constructions and the separate raw material used to produce the constructions. The parts are transported to the machine from the fabrication area by overhead crane and are loaded on a skid on the roller conveyor.

The constructions are then transported to the machine on the infeed roller conveyor. The skid is designed to house several of the different constructions. After the shotblasting the cleaned construction is cleaned from the remaining abrasive by rotating the construction on the outfeed roller conveyor. The remaining abrasive is collected in the two parallel screw conveyors underneath and next to the roller conveyor and returned to the shot blast machine.

After the blasting the cleaned construction can be transported further towards the next step in the production, the painting area. The parts are blasted with 10 turbines with each a 15kW drive and the passage speed is depending on the material between 0,6 and 2 m/min.





<u>The Project</u>

This company chose Kaltenbach as their supplier for this machine due to their extensive experience in the trailer building industry, where they have supplied several machines to other trailer manufacturers. In collaboration with Kaltenbach's sales and project team, they designed the perfect layout for the machine's purpose.

The new building, where the machine is located, was designed around it, including a recess to house the filter unit and bucket elevator. With specific requirements for the foundation design, Kaltenbach produced the foundation plan for the company to prepare before installation. After this initial phase, the machine was manufactured at Kaltenbach's production facility in Hengelo, the Netherlands, and delivered on time for installation in late February 2011.

During the installation and commissioning phase, additional requests were implemented, and final commissioning was completed in September 2011. The machine is now used in multiple shift operations and is operated with high satisfaction.









REFERENCE 3



SPECIALIST MACHINERY SALES AUSTRALIA, NEW ZEALAND & SE ASIA













GIETART HIGH SPEED BLASTER SUBSTITUTE FOR MARATHON

<u>Customer</u>

The group comprises several companies specialising in plant construction and mechanical engineering for steel and nonferrous metals processing. It operates internationally and is owned by the entrepreneurial Weiss family. The shot blast machine is part of a new plant in Chelyabinsk, which began operations in 2009.

The Chelyabinsk Pipe Rolling Plant, where the machine is installed, manufactures various steel pipes, including those for petroleum, natural gas, water pipelines, and industrial processes. It plays a significant role, contributing to 11% of Russia's steel pipe output.

Process Description

The shot blast machine GW4500-875/Marathon A 4008 is installed in the preparation department of the company and is solely used for the blasting of plates.

The plates are cut on plasma cutting machines at the beginning of the line and are cleaned in the shot blast machine in order to be transported to the pipe manufacturing area of the plant. Here the cleaned plates are processed into pipes used for a numerous variety of industries.





GIETART HIGH SPEED BLASTER SUBSTITUTE FOR MARATHON



REFERENCE 4





Customer

The company is a global leader in value-added, high-strength steel, supplying products worldwide. Its facility in Oxelösund, Sweden, is one of several production locations, specialising in high-strength steel plates. Additionally, the company operates factories in Sweden, the USA, and China. To enhance its distribution capabilities for high-strength steel plates, a new distribution center was constructed on the Oxelösund factory premises.

Construction began in 2007 with the aim of commencing operations in 2008. For this distribution center, the former Gietart machine factory/Kaltenbach supplied a fully automated shot blast and conservation line, ensuring efficient processing of steel plates for distribution.

Process Description

The newly produced plates were transported to the distribution centre by truck and before they can be stored they needed to be shot blasted and painted. After this process the plats were stored in an automated high racking storage system.

The plates are loaded on an infeed roller conveyor which is equipped with a centraliser. With this centraliser the plats are always automatically centred on the roller conveyor and will always have the ideal position on the roller conveyor for the blast and painting process. The rollers of the roller conveyors are all covered with a rubber coating and each have a separate frequency controlled drive.

This allows a smooth transportation of the plates and allows a maximum on flexibility of the system. Plates can be transported with a maximum speed of 60m/min.





Process Description

From the infeed roller conveyor the plates are transported to the preheater which heats up the plates to a temperature of app. 25dgr/C. This allows a better cohesion of the paint to the steel and a better drying result after painting. The preheater is a hot air circulation preheater and is equipped with four burners and four ventilators to circulate the hot air around the plates and heat them up with a ΔT of 35dgr. K.

The speed of the plates will be reduced to the process speed of maximum 7,5m/min. Plates will be transported with this speed until they leave the conservation line and enter the outfeed roller conveyor.

From the preheater the heated plates enter the shot blast machine, Marathon A 4008. Here the plates are cleaned from scale and rust and will have a final surface finish of BSA 2,5. This surface finish allows the paint to have a better cohesion to the steel. The shot blast machine is equipped with 8 turbines which are separate driven by eight 55kW drives. Each turbine has a throughput of 520kg abrasive per minute.

After blasting the material will be cleaned from abrasive and will leave the machine completely clean and ready to be go to the next stage of the process, painting. This cleaning is done with a brush blow off plant which brushes the majority of abrasive from the plates. The final abrasive particles and dust is blown from the plates by a double set of cross stream ventilators.











Process Description

From the shotblasting machine the plates are transported to the paint room. In the paint room the plates will be painted with a paint coating of app. 25 μ m which is necessary to store the plates until they can be transported to the end user. The painting machine is equipped with a double set of paint guns which allow the plates to be painted with the extremely high speed of maximum 7,5m/min.

The paint used in this machine is a solvent based paint which is pumped from the separate paint room to the machines. The paint is stored in 1000L IBC containers and is connected to the painting machine by an intricate mesh of rubber tubes, valves and pumps and is fully automated and controllable from the central control room.

Due to the use of solvent based paints the exhaust air needs to be cleaned before it can be disposed of. This is done in the after burner unit. Here the exhaust air, which is polluted by the solvents, is burned and air with carbon dioxide is blown out. This all within the local regulations.

Behind the painting machine the drying tunnel with chain conveyor is located. In this tunnel the just painted plates will be dried by means of circulating warm air around the plates. The drying tunnel has a length of 28 meter and is equipped with 3 burners and 6 ventilators to heat and circulate this air.











Process Description

The painted and dried plates need to be marked in order to have them recognisable for the rest of the system and to have the name of the material itself printed on the plate. This is done by an high resolution inkjet printer which is equipped with an UV light to achieve an immediate drying of the ink. This allow the process to not be interrupted for printing. This marking unit is located above the first part of the outfeed roller conveyor.

The plates are further processed on the outfeed conveyor and are transported towards the automated high racking storage system.

The complete system is operated from a control room with a view over the complete line. The operator can control and monitor every part of the process and has constant access to the ERP system in which the processed plates are stored.



REFERENCE 5



SALES AUSTRALIA, NEW ZEALAND & SE ASIA



REFERENCE 5





The pre-treatment of steel is a crucial step in steel processing, ensuring contaminants like rust, scale, or slag are removed and protective coatings are applied. This process is essential for reducing throughput times and ensuring smooth production, thereby offering economic benefits to industries.

To meet the demands of modern production, companies often need to upgrade their equipment. For instance, profiles up to 24 meters in length and sheets up to 2,500 millimeters wide require sophisticated and reliable systems. Kaltenbach, a renowned manufacturer of metalworking equipment, offers solutions that meet these requirements.

One such solution is the High-Speed Blaster. Equipped with highperformance turbines and precise blasting material dosing, this unit ensures superior blasting performance. Its robust design, with manganese inner lining for quick replacement, and easily accessible components for maintenance, make it an efficient and durable choice for heavy-duty continuous operation.

Complementing the High-Speed Blaster is the Eco Primer system. This system handles the next step in the preservation process, providing an allaround finish with minimal primer consumption. Its automatic synchronisation of spray gasket to feed-through speed and efficient use of heated air in the drying process contribute to both profitability and environmental sustainability. Additional options from Kaltenbach, such as extra painting systems with frost protection features and space containers for paint storage, further enhance production efficiency. These innovations streamline processes, reduce costs, and increase automation, ensuring uninterrupted production and reliable operation.

Through collaboration with Kaltenbach, companies can achieve their efficiency targets and provide reliable preservation services to their customers, meeting both present and future demands of the industry.





GIETART ECO BLASTER SUBSTITUTE FOR SPRINT

In a recent update, an investment was made in a new shot blast system from renowned steel processing plant manufacturer KALTENBACH. This investment aims to enhance customer benefits by reducing contract production run times, a move that has already seen successful implementation.

The installation of the new KALTENBACH shot blasting machine, model Eco Blaster 1504, was a remarkable feat, requiring precision work from a heavy-duty mobile crane to position the machinery for mounting and commissioning. Equipped with four turbines capable of speeds exceeding 300 km/h, the machine ensures optimal processing results by effectively removing contamination, rust, scale, or slag from steel deliveries.

With the new shot-blasting line, the company extends its processing capabilities, offering customers plates, profiles, and coping cuts in SA 2,5 industry standard quality, ready for immediate further processing. This streamlined process saves valuable time, allowing customers to focus on their core tasks and improve order processing efficiency.

Through cautious implementation and testing, a stable and consistent processing quality level has been achieved, ensuring customer satisfaction and operational efficiency.







SPECIALIST

SALES AUSTRALIA, NEW ZEALAND & SE ASIA

The range of applications for surface preparation includes beams, structural hollow sections, steel bars, tubes, and plates, all processed efficiently and promptly. With short order and delivery times, quick turnaround is ensured, with beams and hollow profiles processed on the same day orders are placed and mild steels assured for the next day.

GIETART SHOT BLASTING MACHINE

<u>Customer</u>

With years of expertise in steel construction for industries such as energy, processing, and building, this company specialises in producing windmill towers and foundations. Their effective production plant, equipped with high-capacity, high-tech facilities, ensures timely and high-quality output. Certified to ds/en iso 9001:2008 standards, their production and quality assurance systems guarantee reliability. Their experienced team delivers even the most complex constructions on time and within budget.

Process Description

The shot blast machine GW4500-875/Marathon A 4008 is installed in the preparation department of the company and is solely used for the blasting of plates.

The plates are cut on plasma cutting machines at the beginning of the line and are cleaned in the shot blast machine in order to be transported to the pipe manufacturing area of the plant. Here the cleaned plates are processed into pipes used for a numerous variety of industries.





GIETART SHOT BLASTING MACHINE



REFERENCE 8





KALTENBACH SYSTEMS FOR STEEL PROCESSING

Enhance your efficiency and productivity with our complete high-performance lines and specialised machinery at Kaltenbach. We understand the importance of delivering the right solution for your requirements – effectively, reliably, and safely. Achieve high-quality results with speed, precision, and flexibility in circular and band sawing. Whether it's simple straight cuts or complex angled cuts, Kaltenbach offers the perfect circular or band saw to suit your business needs.

Experience improved drilling performance with our efficient and accurate milling solutions, tailored to your specific requirements. Unlock new possibilities with our unique coping robots, offering automated cutting of complex parts with precision and minimal rework. Maximise efficiency with multiple technologies integrated into one machine for the most effective plate processing. Ensure quality and productivity with efficient material handling and precise measurement solutions.

Our modular design allows for easy integration of individual solutions, tailored to your production environment. Discover how Kaltenbach solutions have transformed operations in our reference projects. Experience the difference with Kaltenbach – where innovation meets reliability.

LEARN MORE HERE

SILS SPECIALIST MACHINERY SALES AUSTRALIA, N









LOOKING TO BUY PRE-LOVED MACHINERY?

Specialist Machinery Sales offer second-hand or used structural steel processing machinery from Kaltenbach, Gietart, Haeusler, SLF and more.

Generally, the machines that SMS has access to are from trading for new machines offered from the machine tool builders to clients of SMS in Australia and New Zealand. Most machines are between 5 and 15 years of age with full-service history available. Some machines can be inspected under power or in their shipping packing ready for immediate delivery to Australasia.

LEARN MORE HERE





JOIN OUR EXCLUSIVE AND GROWING LINKEDIN GROUP

Join our growing and exclusive LinkedIn Group – Innovating Structural Steel Processing and Fabrication Group.

In this group, we bring in thought leadership content, topics, trends and challenges within the steel industry and steel processing automation. We encourage everyone to share your business challenges and solutions that you have encountered and how steel processing automation had helped achieved your business objectives.

JOIN HERE ►



HATE MISSING OUT?

Be the first to receive the latest promotions, new releases and discounted offers by following us on social:





1300 262 123 / +61 8 6500 6880

tellmemore@smsales.com.au www.SMSales.com.au



