



AGTOS

Report

News about surface preparation technology
Issue April 2007

New cleaning shop with 3 blast units



AGTOS steel mill tumble blast machine MR-850

The Hermann Reckers Company was founded in the year 1905 and has remained family-owned until this very day.

More than 200 employees work in the company's three main sectors: machinery, pumps and an iron foundry.

In the iron foundry, state-of-the-art equipment is used to manufacture high-quality castings from a variety of materials. As part of a plan to modernize the foundry's cleaning shop, AGTOS delivered the complete lineup of surface preparation equipment as well as the conveying system. AGTOS was chosen for the job because of its convincing blasting technology and a design concept tailored specifically to the needs of

the Reckers Company. Especially noteworthy is the high degree of automation.

The work pieces leave the moulding shop and are placed by a manipulator in the Power + Free conveyor. The work pieces first move through the cooling zone and are then blasted in a hanger-type blasting unit, which removes the moulding sand. The suspended work pieces proceed automatically to the sorting stations, where manual touch-ups are performed. Mass production parts are blasted in two parallel-working tumble blast machines with a rated capacity of 2.5 tons each.

The new blasting units significantly reduce the blasting time. The scope of delivery included the entire automated system for transporting work pieces via overhead conveyors (including transport through the cooling zone.)

01



Work pieces about to enter the AGTOS hanger-type blasting unit.

Custom-made blasting technology

AGTOS is more than 5 years old. In this first issue of the AGTOS Report, you can read about the things that distinguish our blasting technology. Innovative concepts, solid machine construction and reliable blasting technology have convinced many customers. That applies to new machinery, used machinery that has been modernized, as well as service and spare parts. You can find more detailed information on our website at www.agtos.com or by contacting us for a personal consultation (Tel. +49(0)2572-96026-0).

Your AGTOS Team

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The AGTOS Website

In addition to a broad selection of company and product information, our website also contains other information of interest. This includes links to articles in the trade press and to important organizations concerned with the topic of surface preparation technology.

The site is continuously updated with new solutions in the field of wheel blast machinery. A section devoted to used machinery gives visitors an overview of the latest in used machinery, most of which is available on short notice.

02



Economical Blasting of Sheet Metal, Metal Profiles and Metal Structures



AGTOS roller conveyor blast machine RT-1500

With its highly qualified workforce and ultra-modern machinery park, H. Gewing GmbH, 48683 Ahaus, manufactures individual metal and sheet metal components as well as structural component groups. Individual work pieces, standard designs and series-production parts are all made to the same high standard of quality.

Time was an especially critical factor during this project. According to Managing Director Hermann Gewing:

“We couldn’t wait any longer. For all practical purposes, the blasting equipment had to be installed immediately. AGTOS had the perfect solution.

We began by leasing a used machine, which was then later be replaced by a

new AGTOS machine. When it came time to make the exchange, we only had a long weekend at our disposal.”

AGTOS planned the foundation, which had to be suitable for both the used and new AGTOS machinery. The roller conveyor is installed at ground level and is accessible via a metal grate. Loading can take place from two sides. After the blasting process, a tipper mechanism empties the work pieces of abrasive material. The recovered abrasive falls into the machine’s extended hopper and is thus returned to the abrasive processing loop.

The installed blasting machine has an operating width of 1500 mm. Work pieces to be blasted can have a maximum height of 1000 mm. Abrasive is released to the running turbines only after the work pieces cause a switching threshold located in the entry vestibule to generate the appropriate impulse. This minimizes energy consumption and wear-and-tear inside the machine.

The blast chamber is made of highly wear-resistant manganese steel and is thus optimally protected against attrition. In addition, easily exchanged anti-wear plating is also installed in the direct blasting area of the high performance turbines.

The Gewing Company can certainly look forward to continued business success – thanks in part to this innovative blasting technology.

03



Concrete slabs as they leave the blasting unit.

Blasting technology for concrete blocks and concrete slabs

The use of finished (blasted) concrete blocks and concrete slabs is extremely widespread. AGTOS supplies the blasting technology needed to finish these surfaces. In the case of blasting machines for concrete slabs, work pieces can be transported through the blasting unit by means of a single- or multi-belt conveyor. Outside the blasting unit, the slabs run on rollers in the curves as they proceed to the next processing step. In contrast to rubberized conveyor belts, this transport system offers cost advantages in the form of more economical materials and shorter assembly and service times.



Concrete slabs before and after the blasting process.

04

Annealing is done first, then blasting



Debus GmbH of Buschhütten is a single source for both annealing and blasting services. Fast turnover times and flexibility are top priorities.

In order to blast not only large work pieces, but also smaller parts and – above all – a large variety of components, father and son recently invested in a new tumble blast unit manufactured by **AGTOS**. Pressing a button on the control panel

AGTOS rubber mill tumble blast machine MG-180

activates a loading mechanism that directly loads the blasting machine. After the door is automatically closed and secured against accidental opening, the pre-defined blasting process begins. When the blasting process ends, the door opens automatically and work pieces are incrementally emptied directly into waiting containers. **05**



Blasting and coating

While the main focus of **AGTOS** is on blasting technology, our partner **SLF** concentrates on coating technology. This makes it possible for us to find joint solutions to projects involving both technologies. **SLF**'s long-range nozzle technology is a new kind of ventilation system that makes it possible to coat even large work pieces in an open workshop without the need for an additional enclosed coating cabin. In addition to these savings, the use of ventilation technology that follows the movements of workers makes a significant contribution to the economical operation of these coating units. Telescoping dryers make it possible to reduce the volume of air and also offer even more potential for cutting costs. Learn more at www.slf-oberflaechentechnik.de. **06**

Low-cost alternatives for blasting technology

How can one quickly increase capacity without high investment costs, how can one bridge temporary bottlenecks in production, how can the performance of existing machinery be improved – these are questions faced by many companies. Used machines often represent a low-cost alternative to the purchase of new machinery. However, the need for expert advice is particularly important in this case. The vendor must be especially knowledgeable and be familiar with the advantages and disadvantages associated with almost every machine manufacturer.

Once the right machine has been found to meet the required blasting goal, integrating that machine into the normal course of operations is immensely important. And even when these questions have been answered, the ongoing supply of spare parts must be ensured. Working in close cooperation with customers, **AGTOS** offers a complete program of services in the used machin-

ery sector. This means that used machinery is expertly disassembled, transported, put into storage if necessary, and then assembled at its new location. Many used pieces of machinery are assembled, repaired, modernized and then adapted to a customer's technical and optical specifications at our plant in Emsdetten. Worn parts are repaired or replaced. Along with the turbines, it's often the



Steel mill blast machine before...



... and after reconditioning with new parts and paint.

case that improvements can be made to other machine parts, too. Exchanging or modifying wear parts in the turbines or in the machines themselves – for example, plates for steel mill tumble blast machines – leads to significant improvements in service life. **07**

Tool and die diversity – One special surface



AGTOS hanger-type blasting unit HT-17-23

One of the leading manufacturers in the tool and die sector, and a leader in the production of aluminium castings, Grunewald GmbH & Co. KG in Bocholt, strives for nothing less than perfection in processing its products. An important application area for blasting technology is the cleaning of casting blanks used in tool making. These castings, which have an individual weight ranging from 250 to 800 kilograms, serve as the basis for manufacturing tools used to make, for example, carpet mouldings and insulation elements for the automobile industry.

Grunewald uses this blasting unit to clean unfinished castings after demoulding and – after intermediate processing steps – to later give the castings a final uniform and high-gloss surface. Grunewald was convinced from the very beginning that it had chosen the right vendor for this equipment.

The visual impact made by the machine design and its execution was already one of safety and stability, an impression that has since been confirmed in actual operation. The main body of the blasting unit is made of wear-resistant manganese steel and exchangeable manganese plates provide additional anti-wear protection in the discharge area of the turbines. The heart of this machine, a Type 3.6 high-performance turbine, is equipped with a single-disk turbine that has decisive advantages over the double-disk designs prevalent in the marketplace. For example, no spacer bolts are needed between the two turbine wheels. These bolts disturb the flow of abrasive and cause turbulence.

A further reduction in the number of wear-susceptible parts was achieved by using six instead of eight discharge blades. This cuts costs and has a positive impact on the performance of the equipment.

08

Blasting technology used to process sand castings

Michael Filthaut runs a heavy metal and light alloy foundry that has now borne his family name for three generations. Over time, the product lineup has changed, but not the high demands placed on the quality of design, raw materials, the manufacturing process and post-manufacturing finishing of the foundry's products.

Filthaut also invested in a new blasting unit during its expansion program. "Testimonials from well-known experts with respect to its expertise and the excellent advice offered by its sales engineers convinced me that **AGTOS** was the right company for the job," says Michael Filthaut. **AGTOS** recommended a hanger-type blasting unit with frequency-controlled turbines. A magnetic air classifier is used to recover spent abrasive. The mixture of sand and abrasive is fed to two magnetic drums, which then separate the two materials.

09



Castings after the blasting process

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