AGTOS® Report

Recent Reports on Surface Technology
Issue October 2018

Blasting of aluminium – Business as usual?

Aluminium as a material, in particular die-cast aluminium, is becoming more and more frequent for work pieces which have to be processed.
Aluminium is also interesting as an abrasive media. One reason for aluminium abrasive is the further processing of the work pieces. If a hard kind of abrasive such as e. g. stainless steel abrasive remains at areas of the work pieces which are difficult to access, this might cause damage to tools during the subsequent processing. This is one of the reasons why aluminium abrasive is chosen. In addition, surfaces treated with aluminium abrasive become more visually appealing, too.

For this reason, the engineers and technicians at ***AGTOS*** have dealt with the topic of aluminium intensively and conducted numerous tests in cooperation with customers. They have even developed machines which have been constructed especially for this kind of material. By this means, many experiences were gained in the ***AGTOS*** test center as well as in practice.

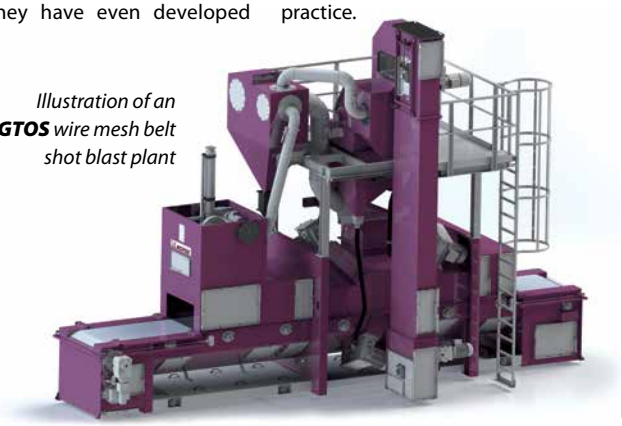


*Illustration of an **AGTOS** wire mesh belt shot blast plant*

EDITORIAL

Work pieces of only few millimetres are shot-blasted with ***AGTOS*** blast machines as exactly as welded structures for beet harvester machines. Read the current issue of our ***AGTOS*** report and learn how other companies have found a solution for their blasting task. We particularly recommend you the report on the combined project of ***AGTOS*** and SLF on page 2.
Visit our constantly updated website at www.agtos.com

Your ***AGTOS*** team

AGTOS with new website

The newly created website with responsive design is just as multifaceted as the turbine-wheel blasting equipment manufactured by ***AGTOS*** at our factories in Emsdetten (D) and Konin (PL). The company attaches great importance to being able to provide solutions to those users who ask themselves how their surfaces can be blasted best. The user has two possibilities to find the most suitable solution.

*Since **AGTOS** is also active in social networks, the website has links to our presences at FACEBOOK and YouTube.*

In the section "Branch-related solutions", the selection menus make it possible to find solutions which have been implemented in certain industrial sectors. Apart from that, you can search for work pieces to display processing solutions.

Another approach is offered to those who already know exactly what type of blast machine they need. Because the item "Shot blast machines" shows and describes all types.

If you wish to make contact please complete a special form or write an email to the manufacturer or to the nearest sales location. The addresses of the sales partners can easily be found in a map.

While the "Company" menu item describes everything you need to know about ***AGTOS*** (and career opportunities within the company), you can find a lot of information from press or other media in "Newsroom". Here you can also find brochure downloads and links to videos. You can also find current information on upcoming exhibitions and news from the company.

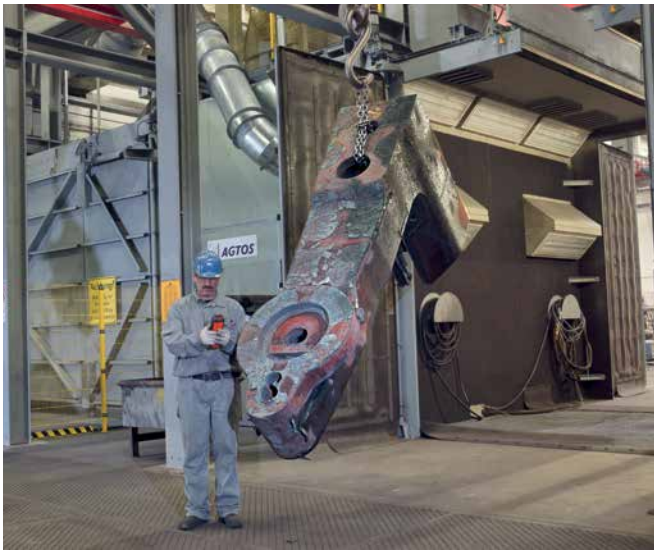
Did you know that...
…one-third of our spare part orders are shipped in one day?

AGTOS blasting unit cleans cast parts for high demands

Whether mining machinery or gearings for wind power plants – the products offered by the Eickhoff Group in Bochum, Germany, must withstand very high demands. To make sure that everything is right, the group has purchased a new continuous blast machine from ***AGTOS*** for their own foundry.

Until now, the foundry was forced to transfer large components to an external service provider for blasting, cleaning and painting after they had been removed from the mould. "Frequently, you can see only after blasting whether a part is okay," explains Ralf Funke, the managing director of Eickhoff Eisengießerei GmbH. This awkward situation is now a thing of the past – at Eickhoff, a new blasting machine runs for parts with a diameter and height of up to 3.5 metres and a work piece weight of up to 20 tonnes. "Now the employees can check a cast part before conveying it for polishing and painting."

The machine removes any adhering mould sand and scale from the cast parts and ensures a higher surface quality. Because three overhead carriers are available, one carrier will be in the unit while one each is loaded and unloaded.
The blasting machine at Eickhoff also features a combined magnet/cascade wind sifter.



AGTOS *continuous overhead shot blast machine including a re-blast room for work pieces with a weight of 20t.*

In the ***AGTOS*** *HT 17-17 type monorail blast machine small parts can be blasted automatically.*

Combined project *AGTOS* – SLF

New surface treatment centre for commercial vehicles

Paul Nutzfahrzeuge GmbH yearly modifies more than 1,000 commercial vehicles. In the selection of suppliers for the surface technology, Paul Nutzfahrzeuge placed very high requirements on innovation, quality, flexibility and adherence to schedules.

SLF delivered a blast chamber of 18.0 x 6.0 x 6.0 m as well as a spray booth, a drying and washing booth of 18.0 x 6.0 x 5.5 m each for processing large work pieces as well as spray booth for small parts coating.
AGTOS delivered a monorail blast machine including the required filter technology for processing diverse small parts.

The ***AGTOS*** HT 17-17 type monorail blast machine, in which diverse small parts can be processed, is located right next to the blast chamber. Overhead carriers with dimensions of max. 1,700 x 1,700 mm can be processed in the blast chamber. Small parts are placed on round blanks and then blasted automatically. The maximum hook load is 800 kg.

After the blasting process the complete carriers are lifted to the on-site transport constructions. After that they can be coated in an approx. 2.0 x 2.0 m large spray booth.

Blasting of truck engines

Originally designed for the blasting of beams, the versatility of ***AGTOS*** OCEAN BLASTERS can be demonstrated by means of the following example:

The passion for large trucks caused the founding of a company in the USA that focuses on repairing and optimising trucks. The requirements are service optimisation and reduced fuel consumption without compromising reliability. The trucks are supplied on order within 4 to 6 weeks. During this time, the OCEAN BLASTER is used for blasting engine blocks.

This demonstrates the flexibility of the machine and the constantly impeccable blasting results. Before the blasting process, the engines are washed and cleaned to remove oil and grease. The subsequent blasting process takes about 6 minutes. The blasting process replaces manual cleaning that previously took more than two hours per engine block.

The customer sells new trucks, truck chassis and bodies with revised engines and gears. The revised trucks are more fuel-efficient than new ones.

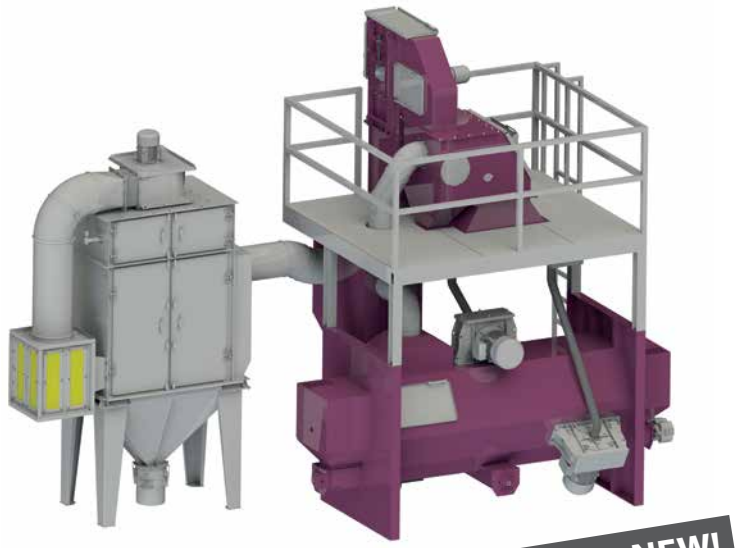
Engine block before and after the blasting process with the ***AGTOS*** *OCEAN BLASTER*

Descaling plates and sections

Steel Services & Allied Industries is a dynamic group of companies in the heavy machinery. Architecturally valuable structural steel constructions are designed and delivered. This is why the requirements for the surfaces are high.

An ***AGTOS*** RT 26-06 type roller conveyor blast machine allows the required flexibility. Plates with the width of 2,600 mm are cleaned and descaled on the machine. Work pieces with a height of up to 600 mm can be processed.

AGTOS *RT 26 roller conveyor blast machine for cleaning and descaling plates and sections.*



Optimal blasting of wire and steel bars

BRAND NEW!

The descaling and cleaning of wire and steel bars is a task which requires special attention. A whole range of ***AGTOS*** DR type blast machines is available to meet the various requirements. Because, depending on the desired drawing speed, machines with three, four or six high-performance turbines are used. The installation occurs in line or autonomously. Depending on the system type, throughput speeds of up to 60 m per min. are reached.

Machines are designed for the work piece envelope circle of 10 to 70 mm. Each ***AGTOS*** high-performance turbine is equipped with jet guide plates. These guide the abrasive exactly to the wire or the bar and thus increase the effectiveness. The jet guide plates are adjusted to the changed envelope circle in a user-friendly manner by the electrical system.

The turbines are crucial

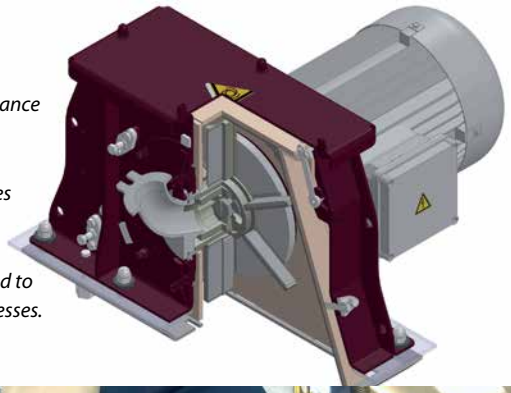
The renowned hardening shop for gear parts uses a wire belt blast machine from a local manufacturer to remove forging scales from work pieces and to achieve a homogeneous appearance of the surfaces. Due to the high utilisation of the machine, it became a production bottleneck.
On this well performing blast machine, the four existing turbines have been replaced by ***AGTOS*** high-performance turbines.

After the reconstruction the belt speed could be increased by more than 50 %. This increase was achieved by the higher shot flow of the new turbines. The engine power and the abrasive used have not been changed during the turbine replacement.

Compared to the previous design, the wear parts now serve three or four times longer. The extended service life brings direct cost advantages for purchasing as well as minimised downtimes and lower maintenance costs from which the customer benefits from now on.

Furthermore the customer has noticed that the abrasive is less destroyed by the turbines now because the speed of the turbine wheels could be reduced (which additionally means energy saving). In addition, the adhesive is guided carefully in the ***AGTOS*** high-performance turbines. Thus, cost savings are achieved also for this consumable. The customer reports that due to the lower amount of waste, the cartridges of the filter system can be used longer, too.

A better blasting result was obtained for the work pieces. Due to the large coverage the surface appears more homogenous which makes it more valuable. This is also the case for geometrically challenging parts.



The ***AGTOS*** *high-performance turbine: Solid housing of manganese steel.*
The modern design reduces the installation times.
The materials of wear parts can easily be adapted to changed production processes.

Due to the installation of ***AGTOS*** *high-performance turbine on this wire belt blast machine, the belt speed has been significantly increased. The service life of wear parts has also been extended considerably.*

Surface processing of long unstable spiral springs

Due to its instability the risk of entangling of this spring type is high. Conventional hollow or caterpillar tread blast machines cannot be used due to their design. The ***AGTOS*** engineers therefore developed a walking beam conveyor shot blast plant for this case of application.

The springs pass the switch unit positioned before the inlet sluice and thus activate the automatic abrasive feeding. From now on the abrasive reaches the high performance turbine and the blasting process starts. This ensures that blasting only takes place when there are work pieces in the blasting area.

Inlet and outlet sluices are provided with rubber segments for sealing. Between the blasting chamber and the sluices additional abrasive veilings are produced which significantly contribute to the sealing of the machine.

AGTOS has developed numerous solutions also for other technical springs. More information can be found in the special brochure or on the ***AGTOS*** website.

Walking beam conveyor shot blast machine for consolidation of long and stable spiral springs.

Drum blast machines are ideal for small bulk goods

This type of blast machine is ideal for blasting small, delicate components. Because small components like chain links, parts for automatic gears and coupling springs have one thing in common: Many parts must be processed uniformly, often with reproducible, identical blasting parameters.

The loading and unloading can be monitored from the control cabinet via video camera.

AGTOS *drum blast machine in operation*

The main advantage of ***AGTOS*** drum blast machines is that the parts are processed with optimum circulation without jamming and that no work pieces are displaced or damaged. In addition the machine provides defined blasting results and avoids costly interruptions in the production process.

The drum is initially the loading position. By swivelling the drum into an ideal blasting position in front of the high-performance turbine, the machine closes automatically. At the same time it rotates around its own axis. The blasting process starts and continues until all work pieces are well mixed and completely blasted. The dust generated during the blasting process is extracted and separated in the associated filter system. The system is unloaded by repeated swivelling of the drum.

Did you know that...

…***AGTOS*** has already delivered to more than 50 countries worldwide?

…with retrofitting of old blast machines to ***AGTOS*** blasting technology, the machine performance could be increased by up to 50 % and additional savings can be achieved in the production process?

For constantly updated news and information, visit our website

www.agtos.com

IMPRINT

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