

Economical cleaning and finishing with a new generation of roller conveyor blasting systems

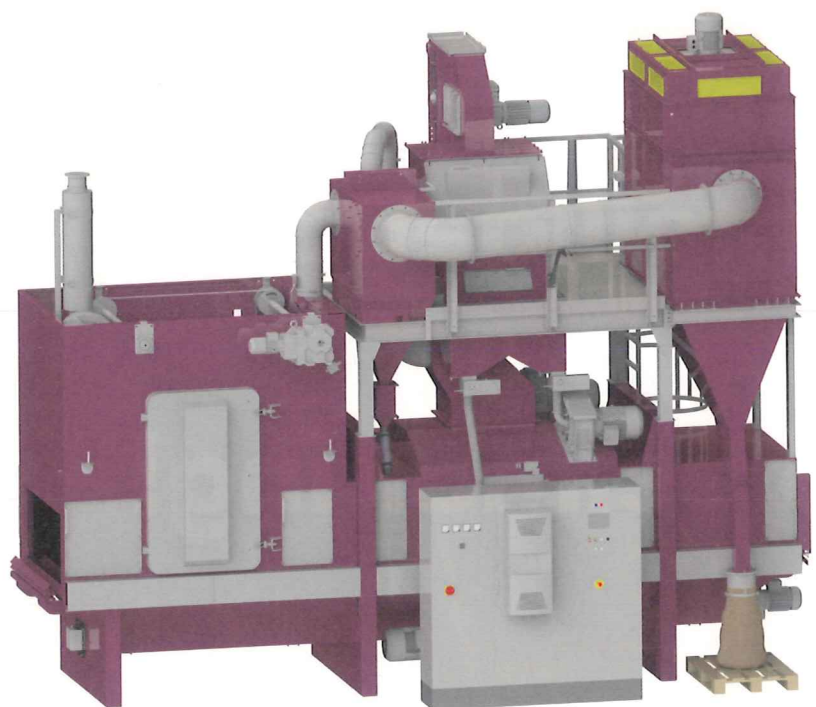
Roller conveyor blast machines are used to remove scale and rust from billets, bars, tubes, sections and sheet metal components. The German manufacturer of blasting systems AGTOS has enhanced its machine concept with special emphasis on high blasting speed thanks to use of powerful turbines.

The treatment of bars, tubes and sections, but also of metal sheets and small welded structures is particularly demanding for the blast machine. AGTOS, the blasting systems manufacturer with headquarters in Emsdetten, Germany, has enhanced its machine concept, offering different types of solutions in conformity with varying market trends. Special emphasis was placed on high blasting speed thanks to the use of powerful turbines.

Even with increasing throughput speeds, the resulting surfaces must always be of top quality. This requires suitable high-performance turbines. They blast the abrasive reliably and with a high level of energy onto the surface of the workpieces. Their output determines the workpiece throughput speed.

Depending on the required blasting quality, turbines with blast wheels of different diameters are used. The power of the motors (kW) varies too. Nevertheless, the principle always remains the same. AGTOS uses single-disc wheels which have proved to be highly efficient even under rough conditions. The throwing blades are fastened in supporting discs on one side. The advantages compared to the popular double-disc wheels are the short installation times and reduced number of wear parts. These measures play an important role for the economic efficiency of the machines.

With this configuration, only six (compared to eight or more) throwing blades are used. Compared to other turbines,



Design scheme of an AGTOS roller conveyor shotblasting machine for long steel products

AGTOS high-performance turbines are characterized by a high shot flow and, thereby, a higher blasting performance with the same shaft power. The maintenance-friendly design ensures quick completion of service tasks. The material of the wear parts is adapted to the type of abrasive used. If the wear parts are made of hard alloys, a long service life is possible even in the case of highly aggressive, sharp-edged abrasives.

Design-related advantages

As a manufacturer of special-purpose machines, the AGTOS designers attach great importance to the user-friendly design of the machines. The relatively low height of the machines ensures that they can be set up even in spaces with a low ceiling. Another

advantage is the fact that it is often possible to use the machines without a special foundation. This saves building costs and increases the flexibility of the machines in terms of their set-up and location of use.

The operator elements of the machines are customized in line with the specific requirements of the customers. This is made possible thanks to mirror-image assemblies and a modular system. Since the robust machines are intended for multi-shift operation, the blast chamber, whose housing is made of manganese steel, is additionally lined with wear-resistant plates.

Several rubber curtains prevent vagabonding abrasive material from escaping the machine. The maintenance time of the curtains has been drastically reduced by ensuring that they can be pulled out

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to the sides. As a result, they do not have to be removed and reinstalled via the machine. Sealing of profile blasting processes against the environment is often a major challenge for conventional machines. Here, AGTOS has developed an economic solution by using special, highly resistant pendulum seals.

AGTOS attaches great importance to the preparation of the abrasive material. The abrasive cleaning process can be controlled by adjustable air conduction that, in turn, can be controlled via several different controllers. This has a positive effect on the blasting result, the reuse of the abrasive material and, in particular, on the level of wear inside the machine. After a machine has been handed over to its new owner, the operating personnel are specifically trained for this task.

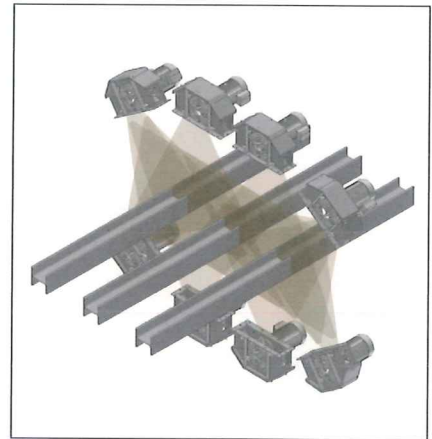
Maintenance- and environmentally friendly cartridge filter system

The filter system sets new standards and contributes essentially to the reliability



AGTOS roller conveyor shotblasting machine for rolled sections

of the process. The dust-laden air is withdrawn from the blasting chamber and flows through the impact separator where heavy dust particles are separated from the airflow. From there, it passes into the lower filter chamber. When it flows through the filter cartridges, the dust is completely removed and the clean air flows upwards into the clean gas chamber.



Example of a blasting pattern for rolled sections

The filter cartridges are cleaned by compressed-air bursts based on the differential pressure. The dust particles are guided into a hopper and collected in a dust collector. From the upper filter housing, the cleaned air is fed to the outside or back into the factory hall. If a filter cartridge is damaged, additional filter inserts catch the dust. ■