

Existing Blasting Machine With Improved Performance

A steel foundry in Switzerland decided to extensively modernize its overhead conveyor blasting machine.

With around 100 employees, Stadler Stahlguss belongs to the Swiss group Stadler Rail, one of the leading suppliers of rail vehicles in Europe. The foundry, based in Biel, generates annual sales of between CHF 24 and 28 million. 60 to 65% of these are for orders for the Stadler Group, says Michael Schmitz, CEO of Stadler Stahlguss.

Other customers come from mechanical and plant engineering for the plastics and food industries, from automotive engineering, energy mechanical engineering and petrochemicals. The framework conditions in Switzerland, a high-wage country, are not easy. So there are just two steel foundries. "We have a unique selling point in terms of component size and tonnage," says Schmitz.

Stadler Stahlguss is said to exist on the international market with a high delivery performance, very demanding cast

parts and high quality. All components pass through the blasting machine. They have unit weights of 3 kg to 10 t.

Stadler Stahlguss recently had the existing blasting machine from an Italian manufacturer modified by AGTOS, the blasting machine manufacturer from Emsdetten, Germany. "The surfaces of the castings were not 100% clean, the scale layers were too firm. This has resulted in high costs for manual regrinding," Schmitz explains the main reason for the modification. In addition, there were long blasting times: "30 minutes was standard, up to 60 minutes for exotic parts," says the CEO. Today it is normally 12 minutes and the outer surfaces are shiny metallic.

Before the modification, AGTOS checked the blasting machine and discussed the project with Stadler Stahlguss. "A first attempt with an AGTOS competitor did not work at all," reports Schmitz. The turbines of the manufacturer from Emsdetten, on the other hand, deliver the best results: According to the discharge angle, the abrasive hits the workpiece surface



Four new AGTOS high-performance turbines on the modernized overhead conveyor blasting machine

more precisely. In addition, they are now better positioned. For the modification, AGTOS not only supplied new high-performance turbines including an adapter frame. Abrasive feed and motors were also replaced. In total, the modification only took three days - practically plug and play, whereby Stadler had already dismantled the old turbines.

New turbines increase performance of the blasting machine

The four newly installed turbines are type TA 4.6. The centrifugal wheel has a diameter of 420 mm, as explained by Mario Hintzen, Technical Manager Service at AGTOS. "The engine output remained the same at 18.5 kW. As a result, we didn't have to change much in the electrical system, except to replace the live circuit breakers," he says. Nevertheless, the performance could be increased by approx. 30 to 35% with the new turbines. A new guide sleeve with a smaller but wider window and the merging of the four turbines create a hotspot with significantly higher intensity when blasting. The discharge speed increases due to the larger centrifugal wheels. "The concentration of the blast



View of the overhead conveyor blasting machine modernized by AGTOS

was the effect that significantly reduced the blasting time," says Hintzen.

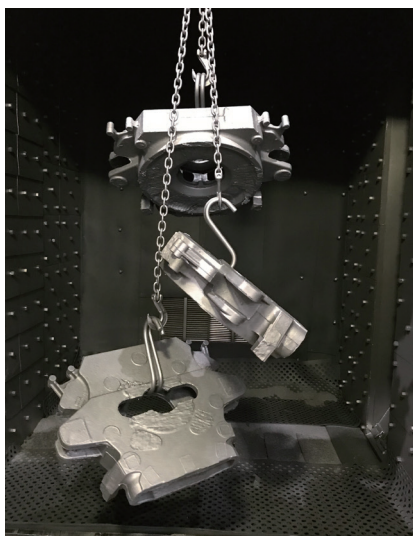
"The basic substance of the blasting machine was still very well preserved, so this modification was justified," he continues. On the one hand, this was due to the fact that large blasting chambers are generally not subject to as much wear as small ones, and on the other hand due to the good maintenance status of the machine. "We chose AGTOS because the overall package was right and the

project could be realized in a short time, because it only took a good six weeks from the order to the assembly date. That was not possible with the original manufacturer," says Schmitz. In addition, it is easier if the communication takes place in such a project in your own language.

Stadler Stahlguss decided against a new machine because there was no space for a new construction in the halls. An interruption of operations - except at

scheduled times - was not possible. "With 30% of the cost of a new investment, we now have a machine that is optimal for our purposes and without a significant production downtime."

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After the modernization, the workpieces are blasted cleanly in less than half the time

In the Spotlight:

Agtos was founded in 2001 in Emsdetten. Meanwhile, over 160 employees work at the two locations. In Emsdetten, the company's headquarters, the concept is created and the shot-blasting machines are constructed, with production located in the Polish town of Konin, near Poznan.

The constant focus on the needs of the customers has made the company an international specialist for the design and manufacture of shot-blasting machines for roughening, cleaning, rust removal, descaling and hardening. That's why customers on all five continents work with blasting machines from AGTOS. In addition to new shot-blasting machines, AGTOS also offers used shot-blasting machines. This is advantageous for companies that need a blasting machine at very short notice or who only use it temporarily.

The abrasive used in the shot-blasting machine does not only work on the workpiece surfaces. The abrasive effect is also noticeable in the blasting machine. For this reason, service, i.e. stocking and delivery, as well as the installation of spare and wear parts, both play an important role. There is also maintenance, repair and modernization work on machines from other manufacturers. These are always carried out by experienced specialists.



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