

Steel mill tumble belt shot blasting machines for surface treatment

Via the latest developments from AGTOS, short maintenance times and reasonably priced spare parts guarantee the economic operation of shot blasting machines. Ulf Kapitza, Director of Marketing and Sales explains.

Burring, descaling, cleaning and derusting are the main tasks during the shot blasting process. Robust cast and forged pieces are frequently produced in batches for further processing and when considering surface technology, the process used by steel mill tumble belt shot blasting machines is considered the most effective shot blasting method for bulk products produced in batches.

Many companies in various sectors trust in the reliability of robust AGTOS steel mill tumble belt shot blasting machines. Especially in foundries, these machines have proven themselves to be very successful. Low maintenance costs are achieved by high quality spare parts, with long lifetimes and short installation times.

In the wheel blasting process, the abrasive (typically cast steel shot with a diameter of approximately 1mm) is loaded onto blasting wheels, which blast it onto the surface of the workpieces using throwing blades. The moving steel mill belt rotates the workpieces to ensure they are blasted continuously during the entire shot blasting process.

The machine is filled automatically using a loading device. It is emptied into an unloading chute with a screen or directly into crates or wire mesh crates.

Industrial process

The loader transfers the workpieces from a container into the shot blasting machine. These pieces slide onto the moving rotating crawler belt through the open charging door, after which the loader moves back to its initial position.

The blasting process starts when the door is closed and the door itself can be opened after a pre-defined blasting time. The finished shot blasted batch is emptied in cycles via the unloading chute into containers provided by the customer.

The abrasive is then cleaned and reused. If any moulding sand adheres to the workpieces, the usual cascade wind sifter is insufficient to clean the abrasive, so a magnetic separator is added. This reliably separates the moulding sand from the abrasive upstream of the cascade wind sifter. The abrasive-sand mixture is separated from the sand by two magnetic rollers, connected in series. In addition, the abrasive is cleaned in the cascade wind sifter. It removes dust and fine particles from



AGTOS steel mill tumble belt shot blasting machine.

the abrasive using an air stream. After this thorough cleaning procedure, the abrasive is ready to be reused.

Modern turbine technology

AGTOS high performance turbines are known for their maintenance friendliness. They are equipped with a single-disk blasting wheel, which eliminates the need to use bolt spacers. This reduces the number of wear parts in the blasting wheel. Users benefit from the reduced maintenance required and from the improved abrasive flow.

An impeller is used for the mechanical pre-acceleration of the abrasive. The zone of impact can easily be adjusted from the outside with a guiding sleeve. The turbine housing is made of highly wear-

resistant austenitic manganese steel with an additional, tough wear lining. Furthermore, the turbine blades of the blasting wheel are easy to replace.

Up to a certain design size, AGTOS high performance turbines are powered by three-phase motors of protection class IP54, which are flange-mounted directly on the turbines. A special labyrinth seal on the turbine housing prevents dust and abrasive from getting into the engine mount.

About AGTOS

AGTOS offers products and services related to blasting wheel shot blasting technology. Blasting wheel shot blasting machines for roughening, cleaning, derusting, descaling and hardening are planned and designed in-house and manufactured and programmed at the company's factories. This includes the transport of workpieces from other processing areas to the shot blasting machines and onward transport from there. For this reason, AGTOS frequently delivers entire systems and plants as a complete solution. There are virtually no limits with regard to the size and capabilities of its plants, which can process everything from chain links of a few millimetres in size to shipping container-sized constructional steel work.

To complete the company's product offering, it also trades in used shot blasting machines. Used machines are customised to meet the specific requirements of the customer's production facilities. Options range

from repair and refurbishment to the retrofitting of used shot blasting machines with replacement components. The result is a lower cost solution that is also high in quality and is practical. This option is particularly interesting for companies with smaller budgets that need a shot blasting machine at short notice or for temporary rather than permanent use.

In addition to spare and wear parts for AGTOS shot blasting machines, the company offers suitable parts for equipment made by other manufacturers. Service, maintenance, repair and upgrading work are also offered for multiple brands, making AGTOS a competent partner for all blasting wheel shot blasting machine needs.

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