

„Smart Abrasive System“ lowers energy consumption, blast media usage and equipment wear

At GIFA 2023 Walther Trowal introduces the “Smart Abrasive” option in its THM troughed belt continuous flow shot blast machines. The “intelligent” control of the media flow drastically reduces the energy consumption and significantly extends the usable life of the blast media as well as of the entire shot blast machine.

To ensure perfect blast cleaning results on all work pieces large continuous flow shot blast machines normally work with a surplus of blast media. This results in higher energy consumption.

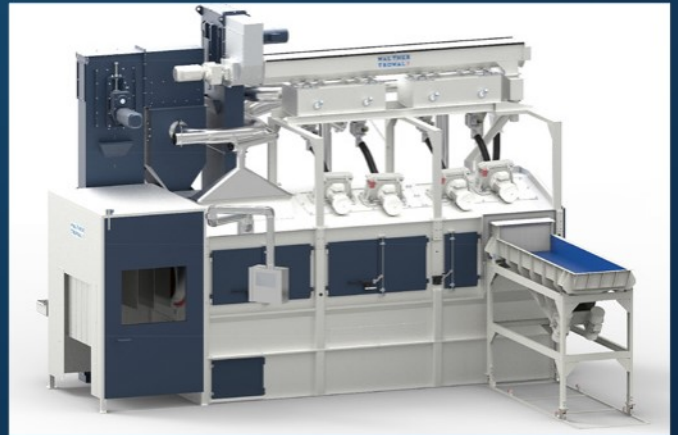
To eliminate this waste of energy, Walther Trowal developed the “Smart Abrasives” option for its THM 700 and 900 shot blast machines, which are equipped with up to four turbines. It adjusts the media flow rate in the entire media recycling system to the blast cleaning requirements as well as the shape and size of the work pieces. If a particular blast cleaning process requires a lower blast performance, the system reduces the media flow through the turbines and the RPM of the augers.

This innovative control system saves not only energy. Since less media is passing through the shot blast machine, it also reduces the media consumption. In addition, the overall uptime of the shot blast machine is increased, and the amount of required work for maintenance is decreased.

With suitable processing trials the optimal shot blasting parameters, such as turbine RPM, media flow rate, etc., are defined for each individual work piece type. Based on these data processing programs are created, which are then stored in the PLC of the machine controls.

Typical applications for the THM machines are automotive components, for example, chassis parts made from aluminum like transverse links, swivel bearings or steering knuckles. For the surface refinement of these light-weight work pieces the manufacturers are increasingly using aluminum blast media. It allows to make the entire blast cleaning process particularly gentle.

Meik Seidler, sales manager for mass finishing and shot blasting at Walther Trowal, expects a growing demand for shot blast machinery that can handle the high work piece volumes typical for the automobile industry: „With the increased production of hybrid and electrical cars more high-strength



A THM 400 shot blast machine in the TTC test and training center in Grand Rapids/USA.

chassis components will be required. Since such vehicles have a higher weight and require a higher torque in their drivetrain, the components must be more resistant against tensile and bending stress. For these applications the THM shot blast machines with the “Smart Abrasives” control system represent a highly economical solution.”

The THM shot blast machine can handle high volumes of bulk goods as well as large and delicate components with complex shapes. Especially for processing delicate work pieces the THM continuous flow machines offer numerous advantages: The work pieces are evenly spaced across the entire length of the troughed belt. For this reason, they are not colliding but may simply touch each other. Moreover, they are not falling on top of each other but gently tumble over the polyurethane coating of the transport rods. The innovative troughed belt transport system ensures that the finished work pieces are discharged from the machine without any nicking or scratching.

**Walther Trowal at GIFA 2023:
Düsseldorf/Germany, June 12 to 16, 2023
Halle 15 / Stand D15**



A THM 400 shot blast machine in the TTC test and training center in Grand Rapids/USA is loaded with aluminum die-castings for the automobile industry.