



C. M. SURFACE TREATMENT S.p.A.

Wheel type shot blasting and shot peening machines
Granigliatrici e pallinatrici a turbina

"C.M. Surface Treatment" introduces the "S/60-H" Automatic Shot Blasting Machine for Die-Casting Cells

C.M. Surface Treatment S.p.A. of Modena, Italy, is noted worldwide for innovative shot blasting solutions for many industries.

Following the request from a major international group of pressure die-casting foundries, "C.M." has developed and patented a new centrifugal wheel shot-blasting machine for large castings in light alloy produced in automatic die-casting cells. The main objective was to be able to detect possible defects on the castings (visible only after shot blasting) in a very short time, without having to produce and accumulate large quantities of potentially defective castings.

In this application, a robot generally removes the casting from the die, inspects the integrity, cools it down in water, places it into a "clipping press" to remove runners and the larger flash then finally drops it off onto a discharge roller conveyor or slide.

Traditionally, the castings were loaded into large containers to be carried to the blasting shop, where several hanger or through-pass shot blasting machines were loaded and unloaded by operators. Today, the discharge roller conveyor (or the slide) feeds directly the "S/60-H" shot blasting machine. The casting is automatically introduced into a cage, which withdraws into the blasting chamber where it starts to rotate. The effective blasting time is very short and averages between 20 & 40 seconds, thus the complete cycle time, including machine function, is compatible with the cycle time of the pressure die-casting unit. The particular positioning of the two blast-wheels ensures complete and uniform coverage. Any shot held in cavities in the casting is discharged during the cage rotation, before the door opens at the end of cycle.

The introduction of the "S/60-H" has allowed better use of work space, avoiding accumulation of parts in containers before and after shot blasting. The detection of possible defects, right away, allows for immediate rectification of the casting process, thus drastically reducing scrap production while simplifying the flow of materials.

Experimental work within "C.M." has indicated that not only is the "S/60-H" unit suitable for high pressure die-casters, but also for other casting technologies such as low pressure, gravity and sand casting. The application of the "S/60-H" for other manufacturing processes, different from casting, is also under trial.

The unit comes complete with incorporated filter (AtEx std.) and control panel with PLC, which can be connected to a net for possible remote control. Loading and unloading the machine can be done using a robot or a simple roller conveyor. No pits or special foundations are required and installation and start-up take only one/two days.



