

Manual Versus Automated?

Sample Processing Provides the Answer by Herb Tobben

Many customers ask what criteria I use to determine if an application could benefit from sample processing. Customers surprise me all the time with unique applications, but a few common characteristics usually indicate a need for sample processing.

Any blast equipment Distributor worth his ALOX has a manual cabinet set up for basic sample processing. This first-line sample processing demonstrates that manual blasting can safely clean or finish a part.

For automation applications, most Distributors send sample parts to the ZERO lab in Washington, Missouri, for evaluation and processing. ZERO's sample processing technicians test blast or shot peen these representative parts, while modifying the variables. These variables include:

- suction or pressure blasting
- type, number, and size of nozzles or guns
- position of nozzles or guns (distance, angle, spacing)
- blast pressure
- dwell
- nozzle oscillation speed
- part movement
- media composition and size

ZERO's technicians maintain painstaking records of each process run, and mark each part. These parts are returned, along with the test results, so the customer can make an informed decision.

The goal of sample processing—design an automated system to get the desired finish, consistently, and economically. The simplest automation applications take parts of relatively consistent size, shape and condition, and apply a predetermined process to produce nearly identical results over a long production run. With the help of quick-change fixtures and programmable controllers, however, ZERO can build machines to handle an assortment of parts over short or long production runs.

So how do you know if automated blast cleaning will help you? If you have one or more of the following, call your Distributor today.

- Two or more employees spend more than half of each day cleaning parts. (Automation, though expensive, will quickly

return its investment by saving labor, speeding production, and reducing rework.)

- Surface preparation - chemical processes, hand sanding, or manual blasting - has become a bottleneck in your production line.
- Your current process takes too long. Or, drying the parts after chemical processing takes too long.
- Your surface preparation involves toxic chemicals. (When your factor in the health and safety issues, environmental compliance requirements, and disposal costs for chemicals, an automated blast system can usually pay for itself in less than a year.
- Your current process produces inconsistent results or causes excessive rework. This is especially true for shot peening, where verifiable and repeatable results are critical to part performance.
- In the past year, you have worn out a manual blast cabinet or have spent more than half the cost of a new manual cabinet keeping your old one running.
- In the past year, you have worn out one or more employees who prep parts.
- You, your mother, your brother, and your children have grown tired of working night and weekends hand prepping parts for the next day's production runs.

Ask your Distributor to help you evaluate your current process. He or she can arrange free sample processing in the ZERO lab and provide a firm quotation on the equipment you need. ●



Automated applications



Typical straight line conveyor machine



Got a question about shot peening, abrasive blasting, or sample processing? Clemco can help. Call **Herb Tobben** at 1-636-239-8172 or submit your request at online at www.clemcoindustries.com in the Contact Us section. Herb Tobben is Sample Processing Manager for the ZERO Automation product line at Clemco Industries Corp. He is a regular speaker at the Electronics Inc. Shot Peening Workshop.