



OPENING SHOT

Jack Champaigne | Editor | *The Shot Peener*

Particle Analysis Research

PURDUE UNIVERSITY students and staff from the Center for Surface Engineering and Enhancement (CSEE) are researching the benefits of the JM Canty Industrial SolidSizer™ Particle Analysis System. The SolidSizer™ is an on-line particle sizing tool to determine particle size, shape, and distribution, thereby eliminating the need for sieve analysis. The project is funded by Electronics Inc. (EI) and JM Canty.

I recall my entry into SAE committees in the early 1980's. I was enthusiastic about shot peening, hoping to sell valves and Almen gages. It didn't take long to get confused about peening media requirements, both new and in-use. I was trying to understand the amount of media that must pass through a screen, the amount that must be retained on a screen, or the amount that can drop down to a pan. Dean Davies from Ervin Industries asked me once, "Did you want small S-110 or large S-110?" He was serious. The screening requirements are very broad.

Bob Gillespie of Premier Shot used a micrometer and measured 1,000 pieces of S-110 media. He discovered that the average size was close to 0.0014". For those that thought that it should have been 0.0011", this is a surprise until you realize that the screen mesh size that requires 50% capture is 0.0011". I'm looking forward to computer-controlled image analysis.

Electronics Inc. recently hosted a demonstration of the SolidSizer™. In addition to the EI engineering staff, the event was attended by Paul Mort, Professor of Materials Engineering at Purdue; Larry Catanzarite with Toyo Seiko; and Langdon Feltner, a Purdue engineering student. ●



Paul Mort, Professor of Materials Engineering at Purdue University, points out data from the JM Canty Industrial SolidSizer™ Particle Analysis System.

THE SHOT PEENER

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