

Collaboration Results in Patent and New Product

THE TWO ARTICLES from Curtiss-Wright/Metal Improvement Company in this magazine coincide nicely with the recent notice of a patent approval that was the collaboration between Electronics Inc. (EI) and Metal Improvement Company (MIC). (See MIC articles on pages 18 and 34.) The collaboration started when I was visiting with Dave Francis at MIC several years ago and we were talking about various aspects of shot peening, including specifications, new technology and audits. (Dave is Senior Vice President at MIC and was the 2002 Shot Peener of the Year.) We were both very involved with SAE specs, especially J442 regarding the Test Strip, Holder and Gage for Shot Peening. We talked about the differences between SAE J442 and the now-cancelled MIL-S-13165 military spec for shot peening and we specifically discussed the differences in the placement of the holes in the Almen holders between the two specs. Someone asking for certification of the holders to both documents was going to be disappointed since it was not physically possible. Choose one or the other.

**JACK CHAMPAIGNE**

Another issue, the flatness of the Almen holder, was a pretty dull topic at that time but Dave told me that MIC had already addressed that issue with a unique device to ascertain the holder flatness. I told Dave I thought that was a pretty clever device since it could be used with the holder in place. The alternative would require removing the holder from its fixture and placing it onto a granite surface for flatness measurement.

I try to monitor US Patent releases and I saw one assigned to General Electric (US Patent 6,148,532) for measuring the holder flatness. Bob Ellis, whom I had met quite some time ago at GE, was the inventor and I was reminded of the device I saw with Dave Francis. Recognizing some differences in the devices, I contacted Dave in 2011 and asked him to consider revisions to make his version more versatile than the one described by Ellis. We knew we couldn't certify the holder gage to both specs so we certified it to only J442. EI enhanced Dave's design by making the holes elliptical to accommodate the SAE spec hole tolerances. We agreed to file a joint patent application. After several months of negotiating with the patent office, we were informed early this year that our patent for the Almen Holder Flatness Gage has been granted.

I really appreciate our relationship with MIC. They have been a great supporter of our workshops and seminars and they make significant contributions to SAE shot peening technology. ●



*The newly patented Almen
Holder Flatness Gage*

THE SHOT PEENER

Editor

Jack Champaigne

Associate Editor

Kathy Levy

Publisher

Electronics Inc.

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56790 Magnetic Drive

Mishawaka, Indiana, 46545 USA

Telephone: 1-574-256-5001

www.theshotpeenermagazine.com

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