



OPENING SHOT

Jack Champaigne | Editor | *The Shot Peener*

Media Inspection

I REMEMBER trying to understand the requirements for media inspections and quality control in my early days in the blast cleaning and shot peening marketplace. One issue was the allowance of 10% of smallest screen size media (in the pan) for new media but the in-use media allowed 20%. My experience in the field revealed that the in-use media seldom had more than 5% in the pan.

After several years of involvement with SAE, I considered that the committee participation by large numbers of media manufactures helped to write the specs and they wanted their media to broadly qualify. In those early days of shot blasting, the on-board media screens were not required thus the 20% broken content was needed. As more rigorous specifications evolved and demanded the on-board screens, the in-use media became much better than the new media. During early impacts of new media, the “weaker” particles would break and were discarded. The process actually improved the media as it was used. Unfortunately, the specs were never tightened to take advantage of this phenomena.

The improvement of media applied not only to cast steel shot but also to cut wire media. The conditioning of cut wire starts from a cylindrical shape and after multiple impacts tends to become spherical. This transition continues during usage so the media continues to improve beyond the as-new state.

So, the media gets better for size and shape and that’s good news. But what about iron contamination of glass bead or ceramic bead? The specs allow .01% by weight of iron contamination. During usage the iron contamination can actually increase since the media is impacting the steel surfaces of the blast cabinet and fixtures. There can also be left-over cast steel or cut wire media when a machine is emptied and new non-ferrous media is placed into use. Continuous monitoring of the iron contamination should be practiced. Don’t just rely upon the original certification or incoming inspection.

My article on page 22 goes into more detail on iron contamination of non-ferrous media. EI’s engineering staff plans to build the magnetic inspection tray mentioned in the article and they will use it on a frequent basis in our prototype laboratory. If it proves useful, we may add it to our web site as optional equipment and recommend that it be used in our non-ferrous valves. ●

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Editor’s Note: Don’t miss the informative article on the 14th International Conference on Shot Peening (ICSP14) by Professor Mario Guagliano (page 38). This event is the foremost conference in the surface treatment industry. The International Scientific Committee for Shot Peening, the ICSP14 Committee, and the Local Organizing Committee have done an outstanding job of bringing together presentations in the state-of-the-art science, technology and applications of mechanical surface treatments. In addition, the beautiful city of Milan, Italy will be an exciting venue for ICSP14. If you haven’t already, visit www.icsp14.org to reserve your place at the event.