Why Certify Test Sieves?

by Terry Reckart

As a significant player in the growing shot peening industry, you should be asking yourself a very straightforward question about your quality control process. The answer is becoming more pertinent each day.

Do I certify my test sieves and validate the performance of my shaking device?

If you do, keep up the good work. If you don't, here is why you should. If you are using your sieves to determine whether product, incoming material, media, etc., is good or bad based on the results obtained by sieving, then your sieves are instruments and must be in your instrument calibration program. Organizations that perform site audits such as Nadcap and FAA are becoming increasingly aware of the need to have sieves in the calibration program and are looking to insure that they are. Likewise, if your organization has an active management program such as ISO 9001-2000 or any of the various automotive or aerospace programs, then your sieves and shaking device(s) need to be part of your calibration program.

Do not be misled into thinking that your new sieve with its serialized "Certificate of Compliance" is calibrated, it is not. To be "calibrated" the instrument must have traceability back to a national standard such as NIST. To achieve this traceability, an additional cost per sieve is paid resulting in a "pedigree" for the individual sieve with traceability back to a national or international standard. When sieves are certified, they are done so to a standard. There are two major standards to which sieves are Verified/Calibrated. These standards are ASTM E-11 (USA) and ISO 3310-1 (International). Your individual instrument calibration program should recognize one of these standards as the governing document for the Verification/ Calibration of your sieves. The use of one of these documents should be specified on any purchase order being placed for sieve certification with an outside firm.

Have you verified the performance of your sieve shaking device? Often overlooked but of vital importance for achieving valid, consistent sieving results are the operating parameters of the sieve shaking device used. Although there are no national standards governing the monitoring and adjustment of these parameters, each equipment manufacturer sets up the equipment to operate within a given set of parameter such as taps per minute, oscillations per minute, hammer height, amplitude, etc. You should determine what the manufacturer's operating parameters are for your given equipment and monitor your device in these areas. When it is noticed that the equipment is no longer within the manufacturer's parameters, the equipment should be overhauled or replaced.

In parting, please remember that the sieve that you tossed into the corner after the last time you used it is an instrument and should be treated as such. When the cloth becomes loose, replace the sieve. When the cloth separates from the frame or tears, don't try to repair it, replace the sieve. The lowly sieve is probably the least expensive instrument you have, but arguably one of the most important in your arsenal of instruments.

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