

Lab Panels vs. Production Panels for Calibration

More than 8 years ago, JSR Ultrasonics initiated the service of preparing PELT Gauge calibrations. In the years that followed the calibration lab refined its skills, improving the accuracy of the calibrations. As part of that process, the current guidelines and restrictions for PELT Gauge calibrations were established. Listed below are a few factors that led to these improvements.

First, JSR asked for panels to be prepared in a specific manner. The panels should not be painted in a lab. It has been determined through several verification studies that lab sprayed panels often do not yield the same calibration results as panels prepared in process.

Later, the lab started releasing calibrations with certificates. A 45-day certificate is now issued when a calibration is released. A 2-year certificate is issued upon verification of the calibration, using a sample that was made in process like a gas door. When a calibration is found to be incorrect during this verification process, JSR personnel make every effort to find out what caused the problem. Investigations in several instances have revealed that the customer originally submitted lab-prepared panels.

Occasionally lab panels are accepted for the purpose of pre-launch testing. In these cases, our customers are informed that production conditions must be duplicated as closely as possible when preparing panels in the lab. It is common that calibrations generated from lab panels do not match those produced later from production samples once they become available. Since JSR personnel are not present when the lab panels are being made it is difficult to determine how closely the production process is being reproduced. Unfortunately, since so many variables are involved, it is difficult to pinpoint which variable or combination of variables causes a significant change in the calibration. What can be stated is that differences have been observed in the calibrations from lab- and process-prepared panels, even when efforts are made to duplicate production conditions in the lab.

Because the calibration accuracy from laboratory panels is questionable, JSR requires that customers sign an authorization form when choosing to submit lab panels. This assures that the customer is aware the calibrations may not be as accurate in measuring production units as calibrations generated from production samples. Customers are also advised to submit production samples as soon as they become available, so any necessary adjustments to the calibrations can be made.

In summary, JSR highly recommends that customers submit production samples for calibration whenever possible. When it is not possible, it is important to notify a JSR Technical Service representative and/or the Calibration Lab for advisement on how best to proceed. This will help JSR to provide the most accurate calibrations possible.