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BOXBORO, MA – If XRF is the best choice for detecting the presence or absence of RoHS-banned substances, why aren't more companies using it?

That was one of the unavoidable questions during the Boston SMTA chapter meeting Tuesday, as several leading XRF suppliers explained their systems' pros and cons and weighed the problems of the nearly two-dozen assemblers in attendance.

That the EU has thus far handled violations quietly – or not at all – probably has a lot to do with the relatively modest penetration of XRF into the electronics industry thus far. Furthermore, North America has no federal legislation banning lead or other reportedly hazardous substances.

Many of the vendors, which included **RMD Instruments**, **Innov-X Systems** and **Oxford Instruments** , echoed **Thermo Scientific** (maker of the Niton handheld XRF), which noted a common response among users: "We're not going to do it until we hear of people being fined."

Added Monet MacGillivray of Innov-X, "There aren't many Martha Stewarts in the industry," alluding to the lack of a high-profile indictment that might spur wider compliance efforts.

Most of the discussion revolved around the capabilities of XRF to detect certain substances, testing standards (another bugaboo), and even determine whether a part is counterfeit.

An absence of industry inspection standards is a severe drawback, the representatives agreed. As RMD's Sia Ashfari asserted, "The lack of standards for spot sizes and measurement area are holding back use. For example, a spot size that is too small can lead to inaccurate readings in lead- and tin-rich and starved areas. But if it's too large, you can't measure certain components." In short, spot size needs to be matched to the component, he says, but there aren't any test standards in place to follow.

He also pointed to the inherent conundrum with using "percent of weight" as a metric. "Percent of what?" he asked. For example, would it be the lead? The component? The board?

The ISTM is in the early stages of determining XRF test methodologies, but it's unclear when those guidelines will be brought to the public.

Many persons noted the influx of counterfeit or incorrectly marked components into the supply chain, and declared with some surprise that assemblers seem content to rework large numbers of boards after finding bad parts, rather than using XRF to inspect boards and components on the way into the factory.

As MacGillivray wryly noted, "People buy XRF for two reasons: to make money, or keep from losing money."

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