Press Release

Rožnov pod Radhoštěm, 05.03.2026

Measuring the reliability of electronic assemblies using innovative Magnalytix's SIR test

The reliability requirements for electronic assemblies are constantly increasing, especially in safety-related and long-lasting applications. At APEX Expo 2026 in the USA, Magnalytix, PBT Works, and Kyzen will demonstrate how assembly cleanliness and long-term reliability can not only be evaluated but also quantified in a reproducible way.

As part of a professional development course, Mike Bixenmann (Magnalytix), Vladimir Sítko (PBT works) and Adam Klett (KYZEN) will lead the seminar “The Reliability of the Electronic Assembly and Components as a Function of Assembly Cleanliness.”, which will take place on Sunday, March 15, from 1:30 p.m. to 4:30 p.m. The course provides practical examples of how to achieve the required cleanliness of electronic assemblies and, above all, how this cleanliness can be reliably checked and verified. The focus is on realistic, modern manufacturing and cleaning processes, as well as suitable test methods for evaluating processes and product reliability.

Magnalytix's SIR test goes far beyond traditional testing methods and was developed specifically for the requirements of modern electronics manufacturing. Instead of generic test coupons, realistic test boards complex components and complete manufacturing processes are used, including selective soldering and cleaning. For electronics manufacturers, the result is reliable information about assembly cleanliness, process stability, and long-term reliability under realistic conditions. Critical ionic residues and flux-related risks are thus identified at an early stage. The Magnalytix SIR test specifically supports process qualification, cleaning validation, and product approval, helping to reduce complaints, meet quality requirements reliably, and ensure the long-term reliability of electronic assemblies.

Another key highlight of APEX 2026 is the conference presentation by Mike Bixenmann and Vladimir Sitko entitled “Glass SIR Test Board Development to Identify Harmful Flux Residues during Assembly and Cleaning Processes.” The presentation will take place on Wednesday, March 18, as part of the Technical Conference (Session 22). In their joint presentation, both experts will provide an in-depth overview of the development of Glass SIR test boards since 2010 and explain the current applications of this highly sensitive testing technology. They will highlight how Glass SIR test boards can be used specifically to evaluate soldering and cleaning processes in a realistic manner and to reveal critical ionic residues that can impair the long-term reliability of electronic assemblies.

With its participation in the training and conference program, Magnalytix, together with PBT Works, is underlining its commitment to developing SIR testing from a purely academic procedure into a practical tool for process qualification. For electronics manufacturers who take a holistic view of assembly cleaning, process stability, and long-term reliability, APEX Expo 2026 offers valuable insights, from knowledge transfer to application-oriented test methodology.

In addition to its diagnostic portfolio, PBT works will be exhibiting its innovative cleaning systems for cleaning PCBs ,wafer-level packages, power modules and SMD stencils at APEX EXPO 2026, in hall C-D, booth 1226.

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About PBT Works

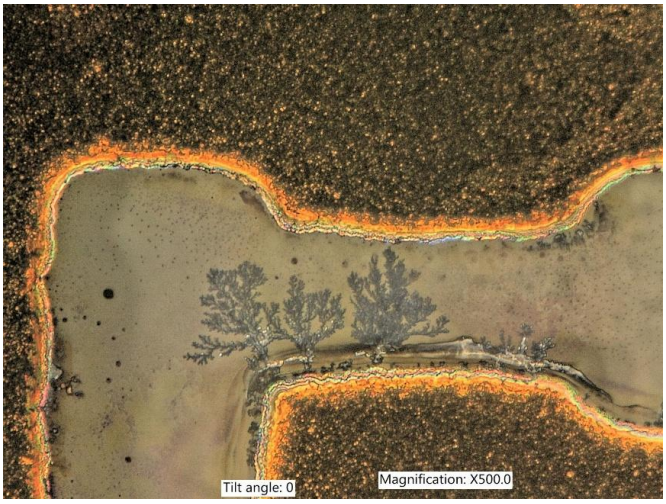
For more than 30 years, PBT Works has been developing, manufacturing, and supplying high-precision cleaning systems for the electronics industry. Founded in 1992, the family-owned company combines long-standing practical experience with in-house research and development to deliver reliable solutions for SMT and electronics manufacturing worldwide.

PBT Works offers a broad and continuously expanding portfolio of cleaning technologies for PCBs, wafer-level-packaging, stencils, power electronic and precision components. Depending on process requirements, systems are configured to meet technical and economic objectives and implemented as stand-alone or inline solutions for efficient production environments.

With a strong focus on quality, process stability, and customer-specific requirements, PBT Works supports manufacturers globally with proven technologies, expert consultation, and application-oriented system design.

More information: www.pbt-works.com

Picture:



Picture caption:
Dendrites after electrochemical corrosion tests on substrates measured using the SIR test from Magnaytics.

Deeplinks:
https://www.pbt-works.com/cleaning-diagnostics

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