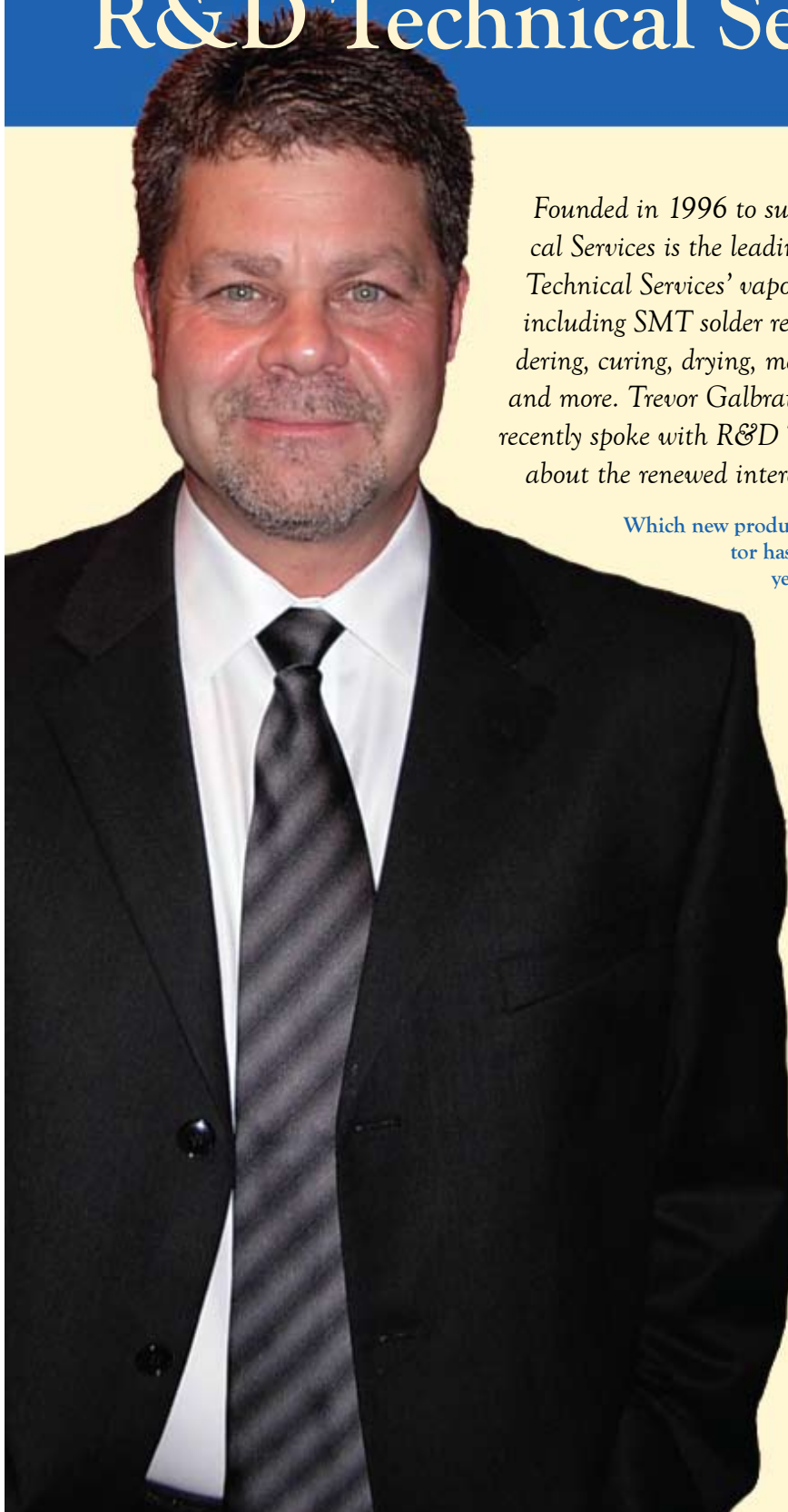


Interview

David Suihkonen, R&D Technical Services



Founded in 1996 to support the vapor reflow market, R&D Technical Services is the leading source of vapor phase equipment. R&D Technical Services' vapor phase systems are used in numerous markets including SMT solder reflow, selective component rework, lead-free soldering, curing, drying, mechanical attachment, plastic package testing and more. Trevor Galbraith, Global SMT & Packaging's editor-in-chief, recently spoke with R&D Technical Services president David Suihkonen about the renewed interest in vapor phase technology.

Which new product developments and technologies in the electronics sector has R&D Technical Services been focusing on in the past year?

Over the past year, R&D Technical Services has been focused on two fronts. First, we have been working closely with some of our high-volume customers to enhance our inline capability for reflow. This work has led us to the evolution of the RD52 inline vapor phase reflow oven, which won a few industry award earlier this year. With adjustable pin chain conveyors, continuous throughput, multi-stage preheat and easy-to-use controls, this machine is an excellent replacement for the traditional convection ovens, making vapor phase a superior choice for the inline reflow process.

Second, we have been very focused on bringing the advantages of vapor phase to the selective component rework environment. This development proved successful in solving many of the issues now facing the rework sector of the industry.

Thus the new V-Works 24 vapor phase rework system from R&D Technical Services—what benefits does this system provide users?

The V-Works 24 rework station brings a number of benefits to the rework environment. One of the biggest, of course, is the ability to limit the maximum temperature seen by the board and component. Because the maximum reflow temperature is tied to the boiling point of the fluid, it is impossible to over heat the product. Let's say you are using a solder that melts at 221°C. You would simply use a fluid with a boiling point of 230°C for reflow, effectively closing the temperature window to 9°C. This is the same reason that vapor phase reflow is gaining ground in the reflow industry—the ability to limit the maximum temperature

while still attaining perfect reflow on all sections of the product.

Other key elements are the uniformity and repeatability of vapor phase and the way it transfers heat. No longer are you required to deliver excessive amounts of heat through IR or hot air to get all portions of the component to heat evenly. There is no shadowing, reflection or deflection of heat in the vapor phase process.

Some of the issues facing the rework industry today include excessive heat, uneven heat and the migration of the heat to other areas of the circuit board. Vapor phase rework effectively solves these issues.

Why is R&D Technical Services so important to the current electronics industry? What do you provide that competitors cannot?

Aside from the fact that vapor phase is a product whose time has come, I think R&D Technical Services has been successful for a several reasons, namely quality, value and customer support. It starts by working to build only the highest quality equipment using only the highest quality materials. We then couple this with experience. Ray Willett and I have more than 50 years of combined vapor phase experience—we know what works.

After building a quality piece of equipment, we take our knowledge and apply it to customer support, treating every customer with respect. We know a large portion of our business is from customer referral and word of mouth. When your name is on the product, you take your reputation seriously. I think the reputation of our products and our company is very high amongst our customers. It is our goal

At R&D Technical Services, you've seen a recent resurgence of interest in vapor phase reflow. To what do you credit this revival?

A number of factors have contributed. Lead-free solder has certainly played a role. The higher melting points of lead-free solder have forced many reflow methods into uncomfortably high temperatures. Unable to transfer heat as effectively and consistently as vapor phase, they are forced in some instances to push maximum temperatures to unacceptable levels. They are simply unable to close the window between reflow and peak temperatures as efficiently as vapor phase, which can place reliability and consistency at risk.

I would say more difficult components and board architecture also have played a part. More densely populated boards and more demanding components lend themselves to much easier reflow using vapor phase and its condensation method

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to keep it that way. At R&D Technical Services, customer support is not just a tag line, it is a way of life, and I think even in today's world people take note of that.

of heat transfer.

Vapor phase ovens have evolved as well with better controls, better containment, higher quality construction and, quite frankly, more interest by the industry in taking an unbiased evaluation of a mature

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I feel all these factors have played a part in this vapor phase resurgence.

How does the rest of 2008 and into 2009 look for R&D Technical Services?

Projections are always part science, part black magic and part guess work. Right now, R&D Technical Services is on track for 2008 to be its best year ever. In the first half of 2008, we posted the best six-month numbers in our 12-year history. With the renewed interest in vapor phase, I expect growth from 2009 as well.

As a company, we will continue to expand our reach, pushing into more emerging economies and strengthening our position in regions where we are already strong. We will continue to be the leader in developing new approaches and applications for vapor phase, and will work to make our vapor phase rework station an influential player in the rework market. R&D Technical Services will continue to be the best at what we do from high-quality, high-value equipment to hands-on customer support.