



GLOBAL COVERAGE

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SCS President and CEO Celebrates 35 Years



Terry Bush, SCS President and CEO

In December, SCS honored Terry Bush, President and CEO, for 35 years of outstanding service and achievement at Specialty Coating Systems!

Terry began his career in 1982 with Union Carbide's semiconductor chemical company, KTI Chemicals. As UCC merged several entities to form Specialty Coating Systems in 1991, Terry moved into the role of Coating Center Manager in Ontario, California. In 1994, he relocated to Indianapolis, Indiana, to manage the Castleton

coating facility and was later promoted to Operations Manager for SCS' global facilities in 1997.

As SCS continued to grow over the years, Terry's role within the company did as well. In 2001, he was named Director of Operations, then Chief Operating Officer in 2006. Terry was then called upon to be SCS' next President and CEO in 2008 and has been leading in that role since.

Over the past 35 years, SCS has grown from just a handful of locations to 20 coating facilities around the world; Terry's business acumen and leadership have played a large role in that growth. From continuous improvement initiatives and a global focus on high-quality standards to establishing internal employee development and recognition initiatives, Terry's influence has positively impacted customers and employees around the world.

In his various roles, from overseeing day-to-day coating center operations to managing global business initiatives, Terry has been a part of many significant milestones that SCS has achieved over its 45 years in the Parylene industry. SCS is pleased to recognize Terry and congratulate him for 35 years of service and achievement at SCS.

Parylene Protects UAVs in Harsh Environments

Whether known by the term Unmanned Aerial Vehicle (UAV) or by one of their many other names (e.g., Unmanned Aerial Systems (UAS), Remotely Piloted Aircraft (RPA), Remotely Piloted Vehicles (RPV), drones, etc.), unmanned systems take on many different forms and functions and can be found in a number of places carrying out their intended mission. Today, UAVs are widely publicized for their military endeavors – flying hundreds of thousands of hours for reconnaissance missions as well as delivering critical payloads. As their successes mount, an increasing number of countries and companies are investing in UAV technology and development. This investment enables the expansion of UAV capabilities, leading to new uses and markets. Newer technologies have also become more affordable, which has opened the door for manufacturers to infiltrate both commercial and consumer marketplaces.

In addition to recreational operation, UAVs are used for commercial and residential real estate aerial photography, traffic monitoring, fire fighting and disaster management. Work is also being done to develop UAVs for services such as home package delivery.



Numerous electronics systems, including GPS and guidance systems, digital communications, flight recorders, cameras and a large suite of

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SPECIALTY COATING SYSTEMS™

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Continuing the Legacy: SCS Omegameter SMD 650

In 1972, ROSE (Resistivity of Solvent Extract) testing was developed and implemented by circuit board manufacturers. These tests monitor the effectiveness of cleaning processes to ensure that no harmful residues, which may cause premature product failure, are left behind during the manufacturing process.

ROSE testing was initially performed manually and was arduous, time-consuming and subject to human error. Shortly after its implementation, the first automated test system was released – the Omegameter OM200. Since that time, the Omegameter cleanliness test system has become the industry standard for static ROSE testing.

In the years following the OM200's release, several model upgrades were made within the Omegameter product line. None of

these iterations, however, have been more transformative than the latest. SCS recently introduced the next evolution of the well-known static testing system – the Omegameter SMD 650.



The Omegameter SMD 650 continues the product line's legacy of rapid, reliable, on-location cleanliness testing. The new SMD 650, which includes heated solution, is operated by an onboard computer, utilizing Windows®-based proprietary software that monitors and records solution temperature, replacing the need for manual measurement. In addition to its enhanced reporting capabilities, the unit's design includes a step-down test cell, providing users easier access to place and remove parts within the cell.

The new SCS Omegameter SMD 650 provides a host of benefits to circuit board manufacturers, including:

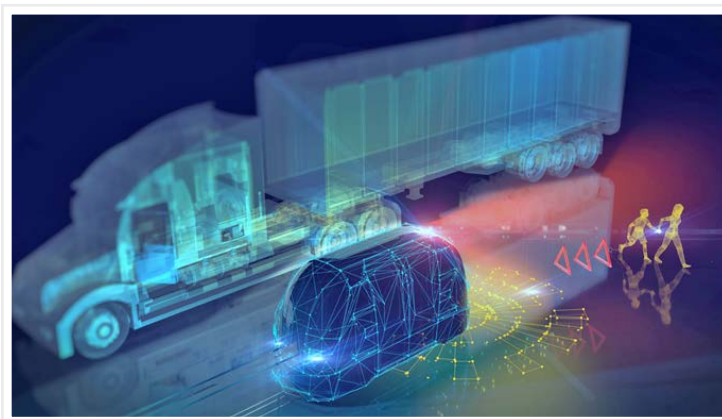
- Identifies the presence of ionic contamination on bare and assembled printed circuit boards and other electronic components.
- Provides an accurate and repeatable method for determining cleanliness on location.
- Provides immediate process control results, eliminating the need for outside laboratory testing.
- Verifies proper cleanliness of surfaces prior to the application of conformal coatings or potting compounds.
- Complies with current industrial specifications such as ANSI/J-STD-001 and IPC-TM-650, and former military specifications MIL-STD-2000A.

To receive more information on the Omegameter SMD 650 features and benefits or to request a quotation, contact Kurtis Olson at 317.244.1200, ext. 0268, or kolson@scscoatings.com.

Parylene and the Future of Autonomous Vehicles

As electronics continue to advance and vehicle reliance upon them increases, autonomous vehicles are no longer a far-off, futuristic idea. Drivers today experience varying levels of automation in the form of driver assistance and partially automated systems. One such technology that is currently being used is Lidar, which uses sensors to detect objects surrounding a vehicle and communicates various responses, e.g., recognizing safe distances between vehicles, determining when to prevent a vehicle from executing unsafe lane changes and communicating when to bring the vehicle to a stop because an object has entered the roadway. Lidar is just one of many technologies that utilize advanced electronics, including sensors that may be mounted both inside and outside the vehicle. While full automation may still be in the infant stage, technologies are only going to grow and expand in the coming years, creating a need for increased component-level protection to ensure reliability and safety.

For years, the automotive industry has relied upon various methods to protect mechanical parts and electronic systems, but new, highly sophisticated electronics often require different methods than previously used. Protection must be achievable on any component size and must reliably survive exposure to harsh environments. Solutions must also be lightweight and cannot add dimension or mass to critical electronic components. Finally, with the growing requirement for cross-system communication, the chosen method of protection cannot interfere with



the sending or receipt of control signals. One commercially available solution meets all of these requirements, and more, and has a long history of providing reliable protection to a host of automotive electronic components – Parylene.

Ultra-thin and lightweight, SCS Parylene conformal coatings offer superior barrier properties to protect components from exposure to chemicals, moisture, corrosive gases and other fluids.

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Coating Center Spotlight: Milford, Connecticut



In 2006, under the umbrella of KISCO Conformal Coating (KCC), a new Parylene coating operation was opened in Milford, Connecticut. Since its beginning, the facility has provided high-quality Parylene conformal coating services to customers in the medical device, automotive, electronics, military and aerospace industries.

In January 2016, the Milford operation was welcomed into SCS. Today, the Milford team, led by Plant Manager Jim Brearley, prides itself on ensuring world-class customer service and operational excellence through continuous improvement efforts. The Milford site is ISO 9001:2008 certified and is one of two SCS facilities serving customers in the northeast United States.

To learn more about Parylene conformal coatings or any of SCS' coating facilities around the world, visit scscoatings.com/locations.

Parylene Protects UAVs in Harsh Environments (continued)

various sensors, are required to command UAVs as well as capture and transmit their data. These electronics need not only be small, compact and lightweight, but must also be able to withstand various harsh operating environments. To protect electronic components and ensure long-term reliability, many designers and manufacturers turn to Parylene conformal coatings.

Parylenes provide robust protection in the form of ultra-thin coatings that add virtually no mass to delicate components. Additionally, because they are applied as a gas in a vacuum deposition process, there are no air gaps or voids in the coating to outgas under atmospheric pressure at flight elevations. Known across the electronics, aerospace and military markets for their excellent barrier properties, pinhole-free Parylene films provide protection against moisture and condensation, which naturally occur due to rapid temperature swings during a UAV's take-off and landing.

Visit SCS at Booth 1243

AUVSI XPONENTIAL

May 1– 3, 2018

Colorado Convention Center | Denver, Colorado

As avionic capabilities and technologies continue to evolve, reliability and rugged protection in harsh environments continue to be paramount. To discuss how Parylenes can safeguard and add value to your application, contact Tim Seifert at 317.244.1200, ext. 0220, or tseifert@scscoatings.com.

Parylene and the Future of Autonomous Vehicles (continued)

In addition, their low dissipation factor and dielectric constant enable the transfer of electrical signal without any loss. Parylene HT[®], developed by Specialty Coating Systems, provides superior UV resistance and is thermally stable up to 350°C long-term (450°C short-term), making it an ideal protective solution for under-hood electronics and other systems that must survive harsh conditions.

The properties of Parylene coatings and their long history of use in the automotive industry – over 45 years – combine to make a superior protection option for advanced automotive electronics, including those

being used in autonomous vehicles. To learn more about Parylene conformal coatings and the protection they offer the automotive industry or to request SCS' new technical article, "Meeting the Challenges of Evolving Automotive Designs: Smarter Vehicles need Smarter Protection," contact Alan Hardy at 317.244.1200, ext. 0261, or ahardy@scscoatings.com.

Connect with SCS

Specialty Coating Systems welcomes you to connect with us on social media. Be one of the first to explore new advances in Parylene technology, upcoming educational opportunities, trade show appearances and much more! Find us on Facebook, LinkedIn and Twitter.



Personnel Highlights



In 2017, **Jim Brearley** accepted the role of Plant Manager at SCS' Milford, Connecticut, facility. In this new role, Jim is responsible for managing the daily operations of the site, which serves automotive, electronics, medical and military customers throughout the region.

Jim started his career in the oil industry, manufacturing geophysical equipment for oil exploration. He then transitioned into the manufacture of powdered metals before coming to SCS in 2011, when he joined the Indianapolis coating center staff as Production Manager.

Jim and his wife have three children and a granddaughter. He enjoys golfing, going to the gym and outdoor activities.



Robert Kling serves as the Plant Manager of SCS' coating facility in Ontario, California, bringing over 20 years of plant management experience as well as a background in process engineering, quality engineering, material control, production/operations management and program office responsibilities. Having worked for large aerospace and privately held organizations, including a previous position within SCS, Robert has spent his career in roles related to the coating and/or manufacture of high-tech systems, including missile systems, life support equipment and natural gas delivery systems.

Robert and his wife of 32 years have two grown sons. In addition to being a car enthusiast, Robert enjoys weight lifting, going to car shows, reading and spending time with family and friends.

Upcoming SCS Trade Shows

- **March 6 - 8, 2018** | Smart Materials | Osaka, Japan
- **March 7 - 8, 2018** | MD&M Cleveland | Cleveland, Ohio
- **March 13 - 15, 2018** | Oceanology International | London, United Kingdom
- **April 16 - 19, 2018** | Defense Services Asia | Kuala Lumpur, Malaysia
- **April 17 - 19, 2018** | Medtec Europe | Stuttgart, Germany
- **April 18 - 19, 2018** | BIOMEDevice Boston | Boston, Massachusetts
- **April 18 - 20, 2018** | Medtec Japan | Tokyo, Japan
- **April 24 - 26, 2018** | SMTA Electronics in Harsh Environments Conference | Amsterdam, Netherlands
- **April 25 - 26, 2018** | Med-Tech Innovation | Coventry, United Kingdom
- **April 25 - 29, 2018** | ILA Berlin | Berlin, Germany
- **April 30 - May 3, 2018** | OTC Houston | Houston, Texas
- **May 1 - 3, 2018** | AUVSI XPONENTIAL | Denver, Colorado
- **May 8 - 10, 2018** | SEMICON Southeast Asia | Kuala Lumpur, Malaysia
- **May 22 - 24, 2018** | Space Tech Expo USA | Pasadena, California

For more information and booth numbers, visit scscoatings.com/shows.

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Military and Avionics Applications | Tim Seifert, Ext. 0220

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Spin Coating, Instruments and Laboratory Systems | Kurtis Olson, Ext. 0268

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Regional Coating Sites

Amherst, New Hampshire, USA | Chase Markey, 603.883.3339

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*The **Global Coverage** exists to promote a better understanding of Parylene and the capabilities of Specialty Coating Systems. For previous issues, visit scscoatings.com.*

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