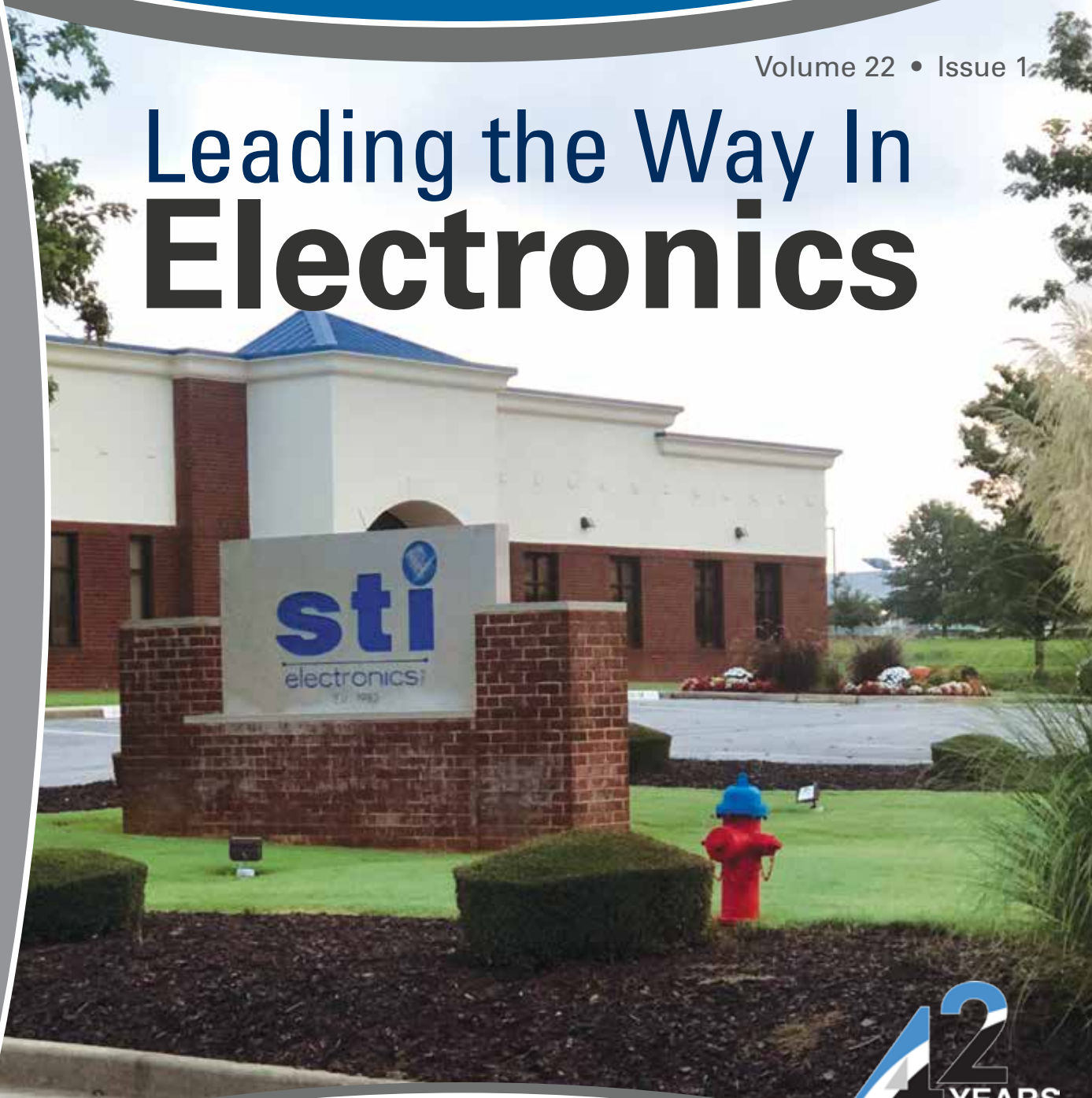




Volume 22 • Issue 1

Leading the Way In Electronics

NEWSLETTER



www.stiusa.com

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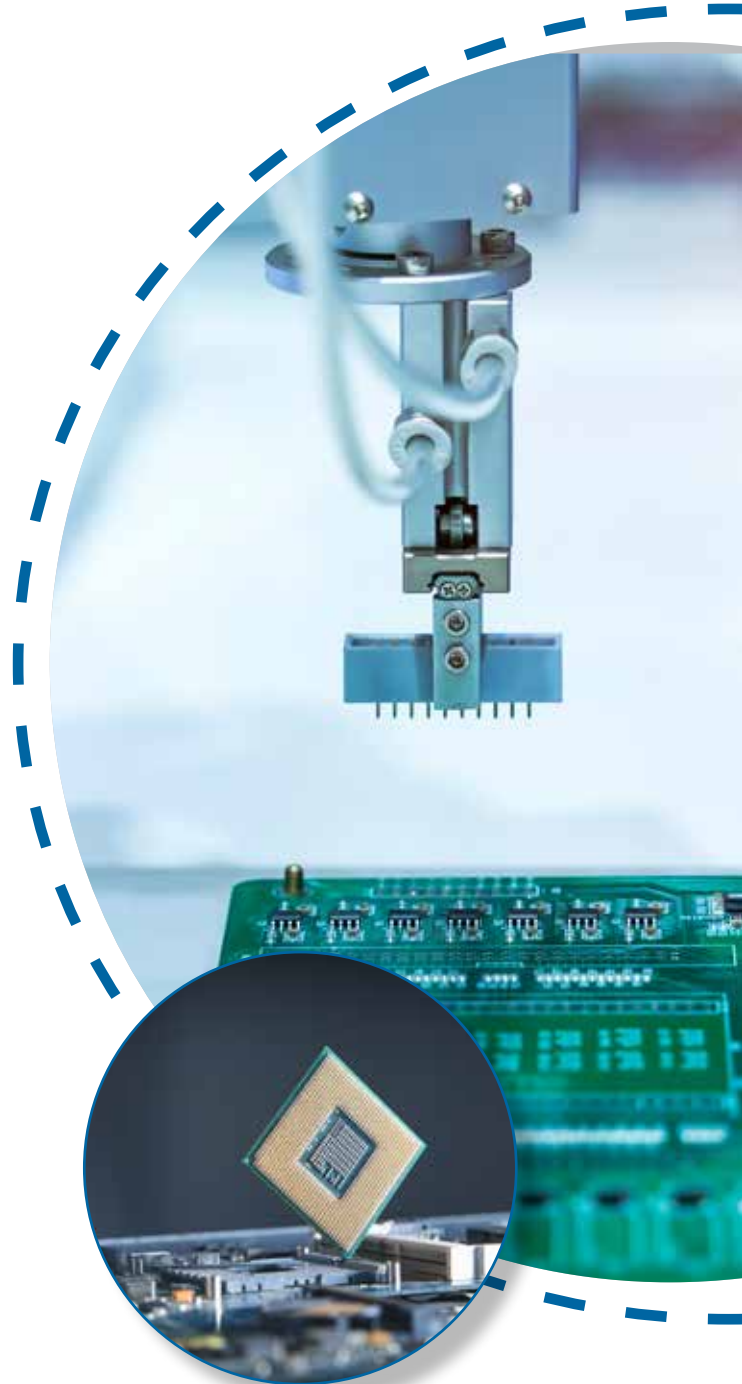
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Dave's World

APRIL, 2024

Picking up where we left off in 2023, this year is off to a great start. Manufacturing is way up and we continue to add people and equipment to meet our customer's needs. In a continuation of our traditionally high reliability manufacturing, we are in the process of adding ISO 13485 to our certifications which will allow us to build even more high reliability medical products.

Jenny and Jason have recently joined our Training Services staff. Both are in the process of being integrated in the world's best training team and doing a great job. Suzanne has hit the ground running in quality as she leads our ISO 13485 certification initiative. (She also has all of our other certifications to keep up to date.) Edrick has joined our manufacturing staff and is doing a great job helping fulfill additional customer quantity requirements. I wrote last year that our average employee tenure was 11.4 years but with the addition of 11 new employees that number is now 10.4 years. 11 new employees have helped us get that number down to 10.4. We're currently looking for at least 3 more team members. I'm sure our whole team is sick of me telling them that it is much more important that we get the right person in a position as opposed to quickly getting a person into a position. Please remember this if our delivery schedule gets stretched a little. Our first goal is to make sure we get your product right.

I'm feeling a little odd (no jokes please) as I write this as it is APEX week and due to some scheduling conflicts, I'm not in California. I miss seeing my "show friends" which are the people I enjoy seeing a couple of times per year at trade shows but rarely see otherwise. Some are suppliers and some are technical folks and in addition to being good people, they are good to know when questions come up throughout a career in their area of expertise. I hope I'm on their list for something.

I was especially looking forward to APEX this year for the IPC's annual awards luncheon. This year, they are presenting the 1st Annual (?) Raby-Scott Training Committee Leader of the Year Award to a current or outgoing training committee chair. They were kind enough to name the award after my Dad and Pat Scott, STI's long time Training Manager. STI has been



David Raby

President/CEO
draby@stiusa.com

very active in standards and training committees for many years so this obviously is an area I'm proud for Dad and Pat to be recognized and I appreciate the thoughtfulness very much and would have enjoyed being there for the presentation.

On a personal note, last month I went on the best vacation ever. I'm not going to write 10,000 words and show 100 photos but will just say it involved some beautiful places, wonderful people, fjords, and a Tasmanian Devil. I thank everyone at STI for not needing me to be around for almost a month. It also concerns me a little that no one needed me around for almost a month but at least my badge worked and the locks hadn't been changed when I got back.

Thank you for all of your support and please let me know if there is anything we can do to help your company be successful.

David Raby





STI Electronics, Inc., a full-service organization providing training services, training materials, analytical/failure analysis, prototyping, and contract electronic manufacturing.



Mission Statement

STI's mission is to provide electronic contract manufacturing, solution-based engineering, analytical services and training resources to the electronics industry.



Quality Policy

STI will consistently provide products and services that meet or exceed the requirements and expectations of our customers as well as industry standards.



Continuous Improvement

STI relentlessly pursue continuous improvement and excellence in projects, products, processes, and services, and define success as getting the right things done well.

UP CLOSE and PERSONAL

Interview with Jenny Taymon Meet Jenny

Job Title: **Master Instructor**

How long have you been part of STI Electronics? **4 months**

What do you do for STI? **Training Instructor**

Just For Fun

Tell us about your family. **I have a 23-year-old son named Dalton, who is an occasional student and works in the electronics industry. I still have my mother, two brothers and 3 sisters.**

Tell us about your pets. **I have 2 dogs. 1 is a golden retriever named Bailey and the 2nd is a golden-doodle puppy named Winnifred (Winnie).**

Do you have a favorite place to visit? **Any sandy beach is good, but my favorite is Hapuna Beach.**

What's your favorite type of music/song/artist? **I have an eclectic sense when it comes to music or artists. It depends on what mood I am in.**

What is your favorite movie or TV show? **My favorite movie is Unforgiven. It's not because it's the most wonderful cinematic experience, but because it was the last movie that my Dad took me to see.**

What's your favorite meal/food? **Chicken Marsala**

Tell us about any hobbies that you enjoy. **I love crafts. I make silverware jewelry, quilts, stained glass and resin.**

What is your favorite motto or quote that summarizes your approach to life?
What you do makes a difference and you have to decide what kind of difference you want to make.
--Jane Goodall

What's one fun thing to know about you? **I love antiques. So, I enjoy what I call junking.**

What's your favorite thing about working at STI? **I enjoy being recognized as a person...not an employee number.**

What is your favorite non-profit to support and why?
Shriners International. Shriners helped my mother find and purchase a specialized wheel chair for my handicapped sister. Without their help, my mother had struggled getting my sister to the care she needed.

Anything else you'd like to share with your team members?
I would like to thank everyone for being so accepting of me. Everyone that I have encountered within this company is considerate, helpful, kind and professional. Thank you all for confirming that the decision to work here was a very good decision.



HAPPENINGS

Congratulations

During the first part of 2024 we have had several anniversaries to celebrate. We would like to congratulate each one on achieving this anniversary with us! They have all worked hard for this accomplishment and we truly appreciate their dedication.



Janie • 8 Years



Earline • 4 Years



Pat • 23 Years



A.J. • 21 Years



Cornelia • 10 Years



Brian • 1 Year



Jeff • 1 Year



Gina • 1 Year

thank you



Brittany • 7 Years



Randy • 36 Years



Dave • 39 Years



James • 26 Years



Melissa • 5 Years



Debra • 5 Years

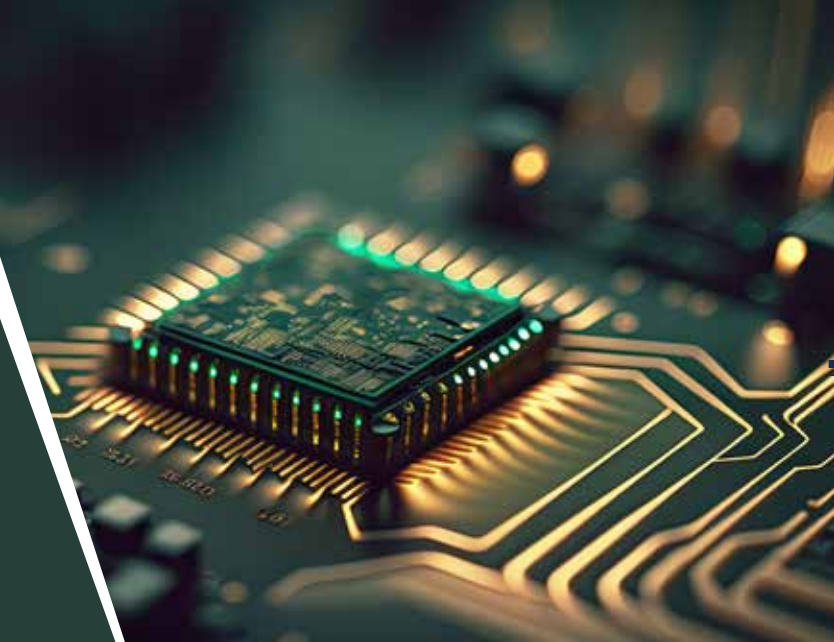


Janie • 8 Years



Scott • 5 Years

Flowers-of-Sulfur Testing



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Analytical Lab Manager
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Flowers-of-Sulfur (FoS) testing is an ASTM standard test method used to determine susceptibility to sulfur induced corrosion. FoS testing is done by suspending the samples in a sealed chamber with a controlled temperature and humidity source and a powdered sulfur source. Common metallic coatings such as silver and copper/copper alloys are susceptible to sulfur corrosion. With the push for lead-free products, these coatings have become more prevalent, such as immersion silver (ImAg). FoS testing is also used to evaluate the porosity and coating quality of metallic coatings. Poor coating quality or porosity can be examined through FoS testing because the sulfur will be able to penetrate the coating and react with the base metal, forming sulfides of copper or silver, resulting in dark spots forming on the surface.

The images below show a PCBA with an ImAg finish after being submitted to a 7-day FoS test. After 7 days of exposure, corrosion around the vias has already started to appear. This corrosion

occurs due to the sulfur attack on the silver finish. Once sulfur induced corrosion has started it can continue to grow overtime, known as creep corrosion, and can eventually lead to a failure when in a moist, sulfur-rich environment. When using an ImAg finish it is essential to consider the end environment of the PCBA and take the necessary steps to protect the ImAg finish if needed. This can include conformal coating or covering all non-soldered areas with solder to remove the exposed silver and protect the underlying copper pads.

The FoS test is a good test for evaluating conformal coating materials and uniformity of coating for resistance to sulfur gas ingress since not all conformal coatings are resistant to sulfur gas ingress. This test method can be utilized to evaluate undercoated, missing coating, and even the porosity of conformal coatings. The FoS test can also be used to evaluate and assist in determining the correct thickness and application techniques of conformal coatings.

The following photos show the corrosion attack one can see following a FoS test. If you would like more information or have any questions please feel free to call or email:

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256-694-1293

Caroline Anthony, Ph.D.
(canthony@stiusa.com)
256-705-5531

ImAg Finish After 7-day FoS Test

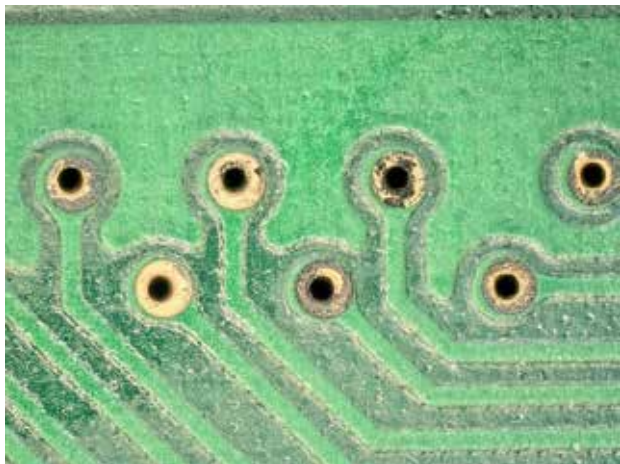


Figure 1



Figure 2

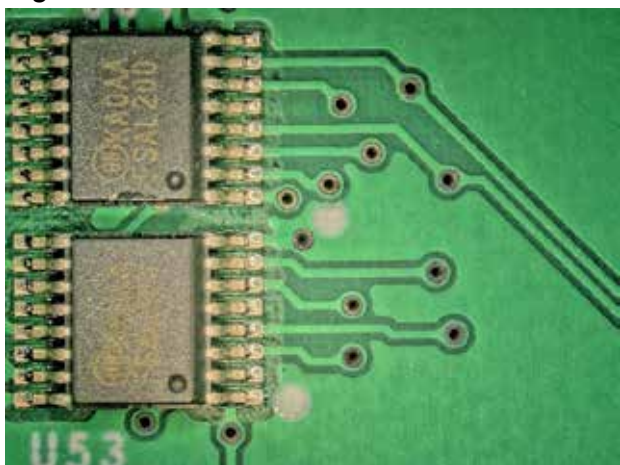


Figure 3

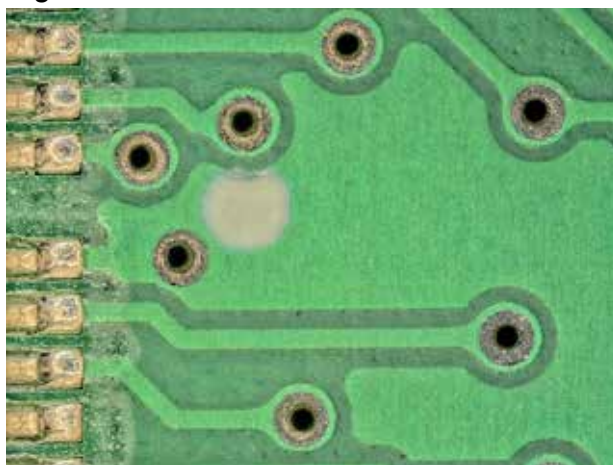


Figure 4

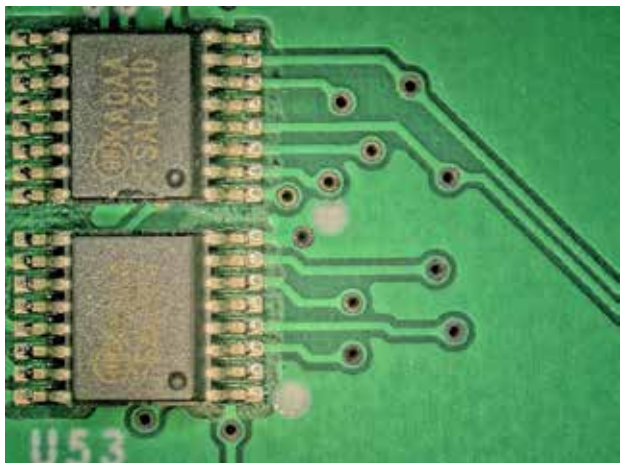


Figure 5

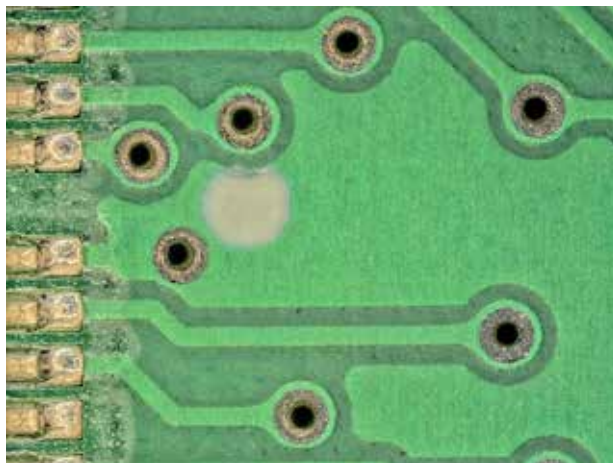


Figure 6

Commitment

**Do you have a question?
Do you need information?
CHAT with us online!**



We are dedicated to enhancing customer satisfaction and building strong customer relationships for both external as well as internal customers regardless of divisional or department lines.



Certifications/Capabilities

AS9100D/ISO 9001:2015 • ISO 13485:2016 (Pending) • ITAR REGISTERED
Cage Code 1JX07 • System for Award Management (SAM) Registration
NIST 800-171 Compliant • Joint Certification Program (JCP) Registration (DD 2345)
IPC J-STD-001/IPC-A-610 • Qualified Manufacturers Listing (QML)
IPC J-STD-001 Space and Military Addendum Qualified Manufacturers Listing (QML)
IPC 1791 Qualified Manufacturers Listing (QML)
Approved on DOE (Department of Energy) MASL
IPC Authorized Training Center • IPC Distributor

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- Electronics Contract Manufacturing
- Electro Mechanical Box Build
- Microelectronics Lab (Clean Room)
- Rework & Repair Services
- Material Failure Analysis
- Analytical Lab Services
- Circuit Design
- Testing
- Prototype Manufacturing Services

800.767.4919

Training Resources

- Training Services
- Training Materials
- Assembly Aids
- Online Training
- Custom Courses
- IPC Training Center
- Multiple Locations
- Cable/Harness
- Inspection

800.858.0604

On-line IPC Training & Certification



ONLINE COURSES

✓ Register Now

In addition to our classroom and on-site training courses, STI offers on-line training and remote testing for the following IPC lecture based Certification/Recertification courses:

- IPC-A-610 Certified IPC Trainer (CIT) and Certified IPC Specialist (CIS)
-Standard required for class
- IPC/WHMA-A-620 CIT and CIS
-Standard required for class
- IPC-A-600 CIT and CIS
-Standard required for class

Note: Currently hands-on courses are not available for on-line training or remote testing for CIT's or CIS's.

The Certified Subject Matter Expert (CSE) on-line courses are also available for

- IPC-A-610, IPC/WHMA-A-620, IPC-A-600, IPC-7711/7721 and J-STD-001
-Standard required for class

Exams that are required for these courses can now be proctored remotely using IPC EDGE.

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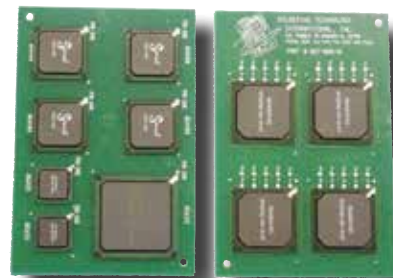
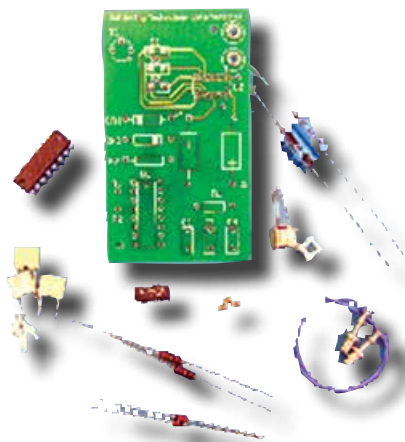
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What's New With IPC Training and Standards

By Pat Scott

The IPC/WHMA-A-620E Certified IPC Trainer (CIT) and Certified IPC Specialist (CIS) courses are lecture based and do not include hands-on work. However, STI does offer the optional hands-on course which is conducted upon completion of the 620 base course for both CIT's and CIS's.



Pat Scott
Training Manager
pscott@stiusa.com

The Optional Hands-On includes:

- H1: Preparation/Measuring/Shielding/Testing
- H2: Crimp Terminations
- H3: Soldered Terminations
- H4: Connectorization
- H5: Splices
- H6: Coax (TNC and BNC)

Please Note: If a CIT wants to conduct the optional hands-on program at his/her facility, the instructor will need to successfully complete ALL hands-on modules.

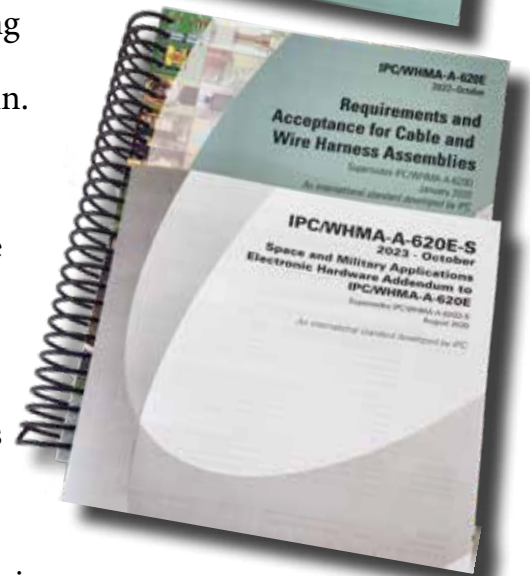
The IPC/WHMA-A-620E Space Addendum was published October 2023 and the training materials have recently been released.

The IPC Policies and Procedures states “Space Addendum exams are revision specific and must be completed with the corresponding exam within 90 days”. If you have to add an optional module after 90 days you will be required to take the mandatory module(s) again. Keep this in mind when scheduling training classes.

If you are interested in seeing the differences between the IPC/WHMA-A-620DS to IPC/WHMA-A-620ES, you can purchase the Redline Comparison Document from IPC. This will provide you with a thorough look at the changes that were made.

The IPC/WHMA-A-620E Space training includes initial certification to the 620E Standard as a prerequisite followed by the 620E Space Addendum training which is a week long and includes 1 day of lecture/testing and the remaining days include hands-on workmanship.

The IPC-7711/7721D Rework, Modification and Repair of Electronic Assemblies was published in December 2023. The training materials are not currently available but as soon as they are STI will be providing training to this new revision.



Here are a few of the changes made to the IPC-7711/7721D:

- Section 1 was entirely rewritten
- Section 2 is now Applicable Documents
- Procedures 2.X were moved to 1.X clauses
- DPAK Component Install and Removal Procedures added
- Edge Board Repair Procedures added
- The up and down arrows (install & remove) that were present at the beginning of each procedure is gone

Currently, the electronic copies of both the J-STD-001J and IPC-A-610J are available to purchase through IPC. However, the printed versions of these two documents will not be available for approximately six weeks.

STI offers IPC courses at our Madison, AL and Houston, TX locations. We can also conduct classes on-site. Please check out our class schedule by going to www.stiusa.com/training.



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