

ESD ASSOCIATION REGIONAL TUTORIALS

ESD Basics for the Program Manager

How To's of In-Plant ESD Survey and Evaluation Measurements

February 26-27, 2014

EOS/ESD Association Inc. • 7900 Turin Rd Bld 3 • Rome NY 13440

Lunch and refreshments provided



Ted Dangelmayer



Carl Newberg

- *Make sure you have people with the right knowledge to maintain your ESD control program at the highest level.*
- *Learn from top industry professionals.*
- *ESDA Certification courses are part of the globally recognized Certified Professional Program Manager Program developed by the ESD Association.*

FC100: ESD Basics for the Program Manager

February 26, 2014

8:30 a.m. - 4:30 p.m.

Instructors: Ted Dangelmayer, Dangelmayer Associates LLC;
Carl Newberg, MicroStat Laboratories, Dangelmayer Associates LLC

Certification: PrM

This tutorial provides the foundation material for understanding electrostatics and ESD and their role in the manufacturing and handling of ESD sensitive devices. The fundamental properties of charge, electric fields, voltage, capacitance, and current are discussed with a view towards understanding key electrostatic phenomena and electrical processes. These include charge generation and decay, material properties, and induction. An overview of device failure mechanisms is presented, including how these models impact ESD control programs. Finally, the course provides an overview of ESD control procedures during handling and manufacturing and an overview of ANSI/ESD S20.20 program requirements. This full day course is required for those in-plant auditors and program managers who are working toward professional ESD certification.

The presentation includes many in-class demonstrations, videos, and animated slides.

Some sample topics covered in this course are:

- Definitions and relationships among important electrical and mechanical properties
- Causes of charge generation and decay
- Field effects and voltages
- Role of capacitance in ESD ($Q=CV$)
- Overview of key measurements including common pitfalls of some measurements
- Review of ESD failure models
- Understanding and demonstrating electrostatic induction
- Utility and limitations of air ionization
- Basic goals of ESD controls
- Properties of effective ESD control products and materials
- Overview of ANSI/ESD S20.20 ESD program development requirements

NOTE:

This class is part of the Program Manager Certification curriculum. More details on the Professional Certification Programs offered by ESDA are on our website at www.esda.org/certification.html.

10/25/2013

Setting the Global Standards for Static Control!

EOS/ESD Association Inc. • 7900 Turin Rd Bld 3 • Rome NY 13440
Phone 315-339-6937 • Fax 315-339-6793 • info@esda.org • www.esda.org



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FC101: How To's of In-Plant ESD Survey and Evaluation Measurements

February 27, 2014

8:30 a.m. - 4:30 p.m.

Instructors: Ted Dangelmayer, Dangelmayer Associates LLC;
Carl Newberg, MicroStat Laboratories, Dangelmayer Associates LLC

Certification: PrM

Compliance verification is one of the most important elements of ESD program management and there are many technical and administrative pitfalls that can be avoided. The attendee will learn not only how to make valid auditing measurements in accordance with ESD TR53 – Compliance Verification of ESD Protective Equipment and Materials, but also how to recognize and avoid common pitfalls. Common instruments will be explained as well as the invalid test results that can result when they are used incorrectly. Advanced auditing techniques will also be covered that enable Class 0 devices to be handled successfully. There are many ways to administer effective Compliance Verification programs. Two successful examples will be presented that were developed independently by different companies. Hidden administrative pitfalls that often result in poor compliance will also be discussed. This tutorial will be highly interactive with live demonstrations, in-plant photographs, and compelling video clips. Students will be encouraged to ask questions and to participate in the discussions

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ABOUT THE INSTRUCTORS

TED DANGELMAYER

Ted Dangelmayer is the president of Dangelmayer Associates, LLC and has assembled an ESD consulting team consisting of the foremost authorities in virtually all ESD areas of both product design and manufacturing. He received the Outstanding Contribution Award and the EOS/ESD Association Founders Award. He was president of the EOS/ESD Association, chairman of the ESDA standards committee, and general chairman of the EOS/ESD Symposium. He has published two editions of his book, ESD Program Management, numerous magazine articles, and technical papers. Ted holds three patents and is iNARTE certified. He is currently president of the Northeast local chapter of the ESD Association and a member of the education committee.

CARL NEWBERG

Carl Newberg is the president of MicroStat Laboratories and is a director of S20.20 Manufacturing Programs for Dangelmayer Associates, L.L.C. He has a BS degree and a professional engineer's license in metallurgical engineering, and a MS degree in materials science. He is an iNARTE Certified ESD Engineer, and is one of the first to test and receive certification from the ESDA as a Certified ESD Program Manager. He has held positions as the ESD program manager for Western Digital Corporation, and has been actively involved in the corporate ESD programs within Seagate Technology and IBM Corporation. Currently he works for Magnecomp Precision Technology as a senior scientist – contamination control. Carl has been a member of the ESD Association since 1995 and was a member of the ESDA Board of directors from 2005 to 2011. Carl was the Technical Program Committee Chairman for the 2004 EOS/ESD Symposium, Vice Chairman for the 2005 Symposium, and General Chairman for the 2006 Symposium. Since 2005, Carl has been actively involved in standards development for the ESD Association, and he served as the Standards Business Unit Manager from 2009 to 2011, overseeing standards development for the ESD Association. Carl was the 2009 recipient of the David F. Barber Sr. Memorial award from the ESD Association.

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First Name: _____ Last Name: _____

Company Name: _____

Street: _____ City: _____

State/Province: _____ Country _____ Zip/Postal Code: _____

Address is (please circle the one that applies) Home or Company

Phone: _____ Fax: _____ E-mail: _____

Course Selection

- February 26, 2014 ESD Basics for the Program Manager
 February 27, 2014 How To's of In-Plant ESD Auditing and Evaluation Measurements



	Cost on or before 1/13/14		Cost after 1/13/14
	Members	Non-Members	Members/Non-Members
1 Full Day (Feb 26, or Feb 27 (one class))	\$510	\$610	\$710
Both Tutorials (Feb 26 and Feb 27 (two classes))	\$1020	\$1220	\$1420

Cancellation & refund requests will be honored if received in writing no later than October 25, 2013 and are subject to a \$50 fee. Any other approved dispositions will also be assessed a \$50 fee.

Payment Information

Payment is required at time of registration. Only checks drawn in U.S. currency on a U.S. bank that is a member of the Federal Reserve will be accepted; make checks payable to ESD Association.

Amount enclosed \$ _____ Check Credit Card

Credit card type: Visa® Mastercard® American Express® Discover®

Credit card number: _____ Expiration date: _____

Name on card: _____ Security code: _____

Cardholder's signature: _____

Accommodations: The Inn at the Beeches
7900 Turin Road (Route 26N)
Rome, NY 13440
Phone: 315-336-1775 Fax: 315-339-2636
Email: thebeeches@cnysip.com
(walking distance to ESDA HQ)

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