

**ESD Standards Overview for the Program Manager
Packaging Principles for the Program Manager
Cleanroom Considerations for the Program Manager
Ionization Issues and Answers for the Program Manager**

Offered by the ESD Association

Date: May 19-20, 2009 • Holiday Inn, Tewksbury, MA
Lunch and refreshments provided.

MAY 19, 2009

▲ESD Standards Overview for the Program Manager

8:30 a.m. - noon • Instructor: David E. Swenson, Affinity Static Control Consulting, LLC

The ESD Association's introduction of the Program Manager Curriculum created a need to modify the Standards Tutorial that has been presented for a number of years, mainly to help individuals prepare for the NARTE Engineering and Technician Exams. Many of the ESDA Standards and Standard Test Methods are discussed in depth in the individual tutorials related to the specific subject matter. This Standards Tutorial provides an overview of all the Standards, grouped into common test types, based on measurement probe and test instruments. A common methodology is used in this tutorial to cover the requirements, applications and specifications for each Standard and Standard Test Method.

▲Packaging Principles for the Program Manager

1:00 p.m. - 4:30 p.m. • Instructor: David E. Swenson, Affinity Static Control Consulting, LLC

Shipping electronic parts within a factory, to another factory, distributor, or to an end-user has always been an area of uncertainty within the manufacturing process. To provide clear-cut information on what type of controlled packaging should be used in any situation, the ESD Association has recently released a comprehensive revision of the obsolete industry standard EIA 541-1988. The new document, ESD S541, is the focus of this session. It provides information and guidance, as well as material specifications, to assist in the design and implementation of a packaging plan for use within an ANSI/ESD S20.20 based ESD control program. Current and newly released test method standards suitable for packaging material evaluation will be described. Course credit applies to the ESD Certified Professional-Program Manager certification curriculum.

About the Instructor

David E. Swenson retired from 3M in 2003 after 35 years of service. The majority of his career involved electrostatic investigation, solutions to static problems and related new product development. After retirement, Swenson and his wife established Affinity Static Control Consulting, L.L.C., to offer electrostatic solutions to industry. He has been a member of the ESD Association since 1984 and is currently President of the Board of Directors, has served as Symposium General Chairman, Sr. Vice President. A long term member of the Standards Committee and Working Group Chair, Swenson has authored numerous technical papers on ionization, packaging materials, triboelectrification, test methods for ESD materials, and ESD control program implementation, presented around the world. Dave is a Life Member of the ESD Association.

These half day classes are required for those program managers who are working toward professional ESD certification.

Co-sponsored by the Northeast Chapter ESD Association

ESD Association	315-339-6937	ph	info@esda.org
	315-339-6793	fax	www.esda.org



Program Manager

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▲ Cleanroom Considerations for the Program Manager
8:30 a.m. - noon • Instructor: Chris Long, IBM

Cleanrooms and clean environments are enabling technologies required for the manufacture of many products that have exacting contamination control requirements in order to achieve defined yield and reliability targets. Clean manufacture is required in the semiconductor, hard disk drive, flat panel display, and pharmaceutical industries, to name a few. Requirements of cleanroom/clean environments and tooling therein result in low humidity levels, low surface contamination levels, use of process-required insulators, and a lack of natural ions in the controlled environment. These factors can contribute to development of elevated static charge levels in close proximity to sensitive product, presenting both a contamination and electrostatic discharge exposure. This tutorial will provide a detailed review of the following concepts:

- Cleanroom clean environment function
- Airborne particle classification standards
- Cleanroom compliance monitoring test methodologies
- Electrostatic attraction relation to airborne and surface contamination
- Electrostatic discharge concerns
- Cleanroom static charge generation challenges and control methodologies

In addition, several case studies of static charge control issues in clean environments will be presented.

▲ Ionization Issues and Answers for the Program Manager
1:00 p.m. - 4:30 p.m. • Instructor: Arnie Steinman

The primary method of static charge control is direct connection to ground for conductors, static dissipative materials, and personnel. But a complete static control program must also deal with isolated conductors, insulating materials, and moving personnel that cannot be grounded. Air ionization can neutralize the charge on insulated and isolated objects. This seminar will

- Examine problems caused by static charges
- Review common methods for generation and control of static charge
- Illustrate the importance of ionizers in a static control program through demonstrations
- Explain the major types of ionizers and the varying environments
- Discuss electrical and performance test methods
- Demonstrate ionization measurements using the Ionization Standard
- Present installation, safety, maintenance, and contamination issues
- Analyze case histories of the use of ionizers in a variety of work environments

About the Instructors

Christopher Long is a senior engineer with IBM Research, with 26 years experience in semiconductor manufacturing. He currently is involved with research and development magneto-resistive random access memory (MRAM). Previously he had responsibility for contamination and ESD control program strategy for IBM's semiconductor manufacturing facilities. Mr. Long has published and presented numerous papers on semiconductor manufacturing, defect reduction and yield modeling, and has served as co-chair of the International Technology Roadmap for Semiconductors (ITRS) Yield Enhancement technology working group, responsible for development of the Yield Enhancement chapters of the 2001 and 2003 ITRS. Mr. Long received a BS in physics from Beloit College in Beloit, WI (1980), and an MS in engineering from the Thayer School of Engineering, Dartmouth College (1990), in Hanover, NH.

Arnold Steinman is Chief Applied Technologist for MKS, Ion Systems, Alameda, CA, responsible since 1983 for the design concepts of the company's ionization static control products. He holds four patents covering air ionizer technology. Steinman graduated from the Polytechnic Institute of Brooklyn, receiving both BSEE and MSEE degrees. Steinman is a member of the Board of Directors of the ESD Association and a past chairperson of the Ionization Standards Committee. Steinman is also a senior member of the Institute of Environmental Sciences and Technology (IEST).

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Registration Form

Last Name: _____ First Name: _____

Company Name: _____

Street: _____ City: _____

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

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

Phone: _____ Fax: _____ Email: _____

Course Selection

May 19, 2009

- ESD Standards Overview for the Program Manager (8:30 a.m. - Noon)
- Packaging Principles for the Program Manager (1:00 p.m. - 4:30 p.m.)

May 20, 2009

- Cleanroom Considerations for the Program Manager (8:30 a.m. - Noon)
- Ionization Issues and Answers for the Program Manager (1:00 p.m. - 4:30 p.m.)

	Cost on or before 4/13/09		Cost after 4/13/09	
	Members	Non-Members	Members	Non-Members
1/2 day - each (AM session or PM session)	\$295	\$395	\$495	\$495
Full Day (1 day or two half days)	\$495	\$595	\$695	\$695
Both Full Days	\$990	\$1,190	\$1,390	\$1,390

Purchase orders not accepted for registration

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. Visa®, Mastercard®, and American Express® are accepted.

Amount enclosed \$ _____ Check Credit Card

Credit card type: Visa® Mastercard® American Express®

Credit card number: _____ Security code: _____

Name on card: _____ Expiration date: _____

Cardholder's signature: _____

Accommodations

Holiday Inn Tewksbury/Andover
 4 Highwood Drive, Tewksbury, Massachusetts 01876
 Telephone: 978-640-9000 - Fax: 978-640-0623

Please Email, Fax or Mail completed form to:

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