

ELECTROSTATIC ATTRACTION ONLINE

MAY 27, 2010 • 11:00 A.M. EASTERN TIME

ELECTROSTATIC ATTRACTION

May 27, 2010 • 11:00 a.m. Eastern Time • Course Length - One Hour.

Instructor: Carl Newberg, MicroStat Laboratories & Dangelmayer Associates, L.L.C.

This training will cover the causes and effects of electrostatic attraction (ESA) and the solution to ESA problems in a variety of industries. Electrostatic attraction problems plague industries from photographic to medical and electronics. In the electronics industry alone, electrostatic attraction problems can be found in disk drive assembly, wafer fabrication and PC board assembly. The solutions to these problems can be found by applying a combination of the fundamentals of electrostatics and contamination control. An overview of clean rooms, ionization, materials and the control of static electricity will be presented. Real world problems and their solutions will be discussed using case histories.

- I. Basics of electrostatics
- II. Types of bonding
- III. Physics of electrostatic attraction
- IV. Industrial problems
- V. Solving electrostatic attraction problems
- VI. Case studies

ABOUT THE INSTRUCTOR

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 B.S. degree in Metallurgical Engineering, a M.S. Degree in Materials Science, and a professional engineer's license (Met. Eng.). He is also 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 is pursuing ISO 9000 Lead Registrar certification from RABQSA. He has held positions as the ESD Program Manager for Western Digital Corporation, and has been actively involved in the corporate ESD program at 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. He has been a Board member since January, 2005, and 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. Currently, Carl is the Standards Business Unit Manager, overseeing standards development for the ESD Association. Carl was the 2009 recipient of the David F. Barber Sr. Memorial award from the ESD Association.

Equipment Requirements

This course uses a multi-way audio broadcast over the Internet. You will need a soundcard and speakers (a headset is recommended) installed to hear the presenter during the course.

Attendees can send questions to the presenter via text chat, other interaction is not available.

ESD Association • 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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Registration Form

First Name: _____ Last 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: _____

Cost	members	non-members
	\$95.00	\$140.00

**Registration is requested by May 6th to guarantee course scheduling
Registrations will be accepted until May 27th**

Refunds will not be given for cancellations. In the event of a cancellation, credit will be given to attend a different online class.

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®, Discover® and American Express® are accepted.

Amount enclosed \$ _____ Check Credit Card

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

Credit card number: _____ Expiration date: _____

Name on card: _____ Security code: _____

Cardholder's signature: _____

Mail, or fax this form with payment to:

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ONLINE TRAINING