



**SOCIETY FOR THE ADVANCEMENT
OF MATERIAL AND PROCESS
ENGINEERING**

NEW JERSEY CHAPTER

**NOVEMBER NEWSLETTER & MONTHLY NOTICE
NOVEMBER 4, 2010 (1ST THURSDAY)**

**NON DESTRUCTIVE INSPECTION OF COMPOSITE STRUCTURES
USING LINE SCANNING THERMOGRAPHY**

OBDULIA LEY, PHD

Research Scientist

Mistras Group

195 Clarksville Road

Princeton Junction, NJ 08850

Email: obdulia.ley@mistrasgroup.com

Phone: 609-716-4042

Fax: 609-716-4057

MEETING DETAILS

Place: Bridgewater Manor, Bridgewater, NJ; (908) 658-3000

Time: 5:30 Cocktails (Cash Bar); 6:15 Dinner; 8:30 Adjourn

Cost: \$10.00 Advanced Registration; \$15.00 at Door; Students - Free

This meeting is open to all SAMPE members, spouses, guests, and other interested parties

Reservations please contact John Osterndorf at 973-248-5885 or by email at sampejohn@yahoo.com

by noon the Wednesday before the meeting.

Directions to Bridgewater Manor: From I-287 north, take exit 22A (206 south). Go thru two lights, Bridgewater Manor is on right. From I-287 south, take exit 22. Make right at end of ramp. Make next left, a jughandle to cross 202/206 to go south on 202/206. Go thru three lights, Bridgewater Manor is on the right.

SAMPE Best Chapter Award Winner:

1990, 1991, 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001

SAMPE Chapter Service Excellence Award Winner:

2002, 2003, 2004, 2005, 2006 (award retired after 2006)

SAMPE Chapter Sponsored Conferences:

ISSE – 1990(Anaheim), 1994(Anaheim), 1996(Anaheim), 1998(Anaheim), 2002(Long Beach)

ISTC – 1981(Mt. Pocono), 1989(Atlantic City), 2006(Dallas), 2009(Wichita)

ISEC – 1994(Parsippany)



**NEW JERSEY CHAPTER SAMPE
NOVEMBER NEWSLETTER**

Page 2

2010 – 2011 MEETING SCHEDULE

September 9, 2010 – Henkel’s Approach to Reduction to Hexavalent Chrome in Conversion Coatings, Matthew Clark, Henkel Corporation, Madison Heights, MI	March 3, 2011 – TBD
October 7, 2010 – Improved Performance of Polyaryl Ether Amide Matrix Resins, Borys Schafran, Evonik Degussa Corporation, Parsippany, NJ	April 1, 2011 – TBD
October 11 – 14, 2010 42 st International SAMPE Technical Conference, Salt Lake City, UT Sponsored by the Utah Chapter	May 5, 2011 – Metal Composite Hybrid Materials: Air, Land and Sea Products, James F. Stevenson, Honeywell Aerospace, Morristown, NJ
November 4, 2010 – Non Destructive Inspection of Composite Structures Using Line Scanning Thermography, Obdulia Ley, Mistras Group, Princeton Junction, NJ	May 17 – 20, 2011 – 55 th International SAMPE Symposium & Exhibition, Long Beach Convention Center, Long Beach, WA Sponsored by Orange County Chapter
December 2, 2010 – Composites in Wind Energy, Peter Toohey, Evonik Degussa, Parsippany, NJ	June 2, 2011 – TBD
February 3, 2011 – TBD	July 7, 2011 – 28 th Annual NJ SAMPE Golf Tournament, Picatinny Arsenal, NJ

Notes The NJ Chapter sponsors a student chapter at Drexel University.

OCTOBER MEETING

At the October meeting, Mr. Borys Schafran gave an excellent presentation entitled Improved Performance of Polyaryl Ether Amide Matrix Resins. The New Jersey Chapter wishes to thank Mr. Borys Schafran for the excellent presentation.

UPCOMING CONFERENCES

**SAMPE 2011 – ISS&E – Long Beach CA. May 23 - 26, 2011
Sponsored by SAMPE Orange County Chapter**

**SAMPE 20110 – ISTC – Forth Worth, TX – Oct. 17 -20, 2011
Sponsored by SAMPE Dallas/Fort worth Chapter**



**NEW JERSEY CHAPTER SAMPE
NOVEMBER NEWSLETTER**

Page 3

**NON DESTRUCTIVE INSPECTION OF COMPOSITE STRUCTURES
USING LINE SCANNING THERMOGRAPHY**

OBDULIA LEY, PHD, MANNY BUTERA, VALERY GODINEZ

Research Scientist

Mistras Group

195 Clarksville Road

Princeton Junction, NJ 08850

Email: obdulia.ley@mistrasgroup.com

Phone: 609-716-4042/Fax: 609-716-4057

ABSTRACT:

This work deals with the non destructive analysis of different composite structures and composite materials using Line Scanning Thermography (LST), a non-contact inspection method based in dynamic thermography. The LST technique provides a quick and efficient methodology to scan wide areas rapidly; the technique has been used on the inspection of composite propellers, sandwich panels, motor case tubes and wind mill blades, among others. In composite structures, the detection of flaws (disbonds and delamination) is critical for accessing overall structural integrity, the use of dynamic thermography is particularly attractive. An important factor in the application of LST is the optimization of the scanning parameters namely heat deposition and scanning velocity; these parameters are selected given the thickness of the composite, the defects depth and the thermal properties of the material under study. This study consisted in developing protocols to inspect composite samples with embedded flaws and with different number of plies. In this presentation, protocols to inspect thin and thick composites will be presented and the thermal images acquired using LST will be compared with ultrasonic c-scans to identify the type of defects than can be easily observed with noncontact thermography inspection.

BIOGRAPHY:

Dr. Obdulia Ley is currently a research scientist at Mistras Group, where she focuses in the application of thermography for nondestructive testing. Her previous work was focused on medical thermography, and mathematical modeling. Dr. Ley holds a Bachelor's degree in Physics, and a PhD in Mechanical Engineering from Rice University. Before joining Mistras Group, she was an assistant professor at Texas A&M University. She is a member of ASNT and ASME.



**NEW JERSEY CHAPTER SAMPE
NOVEMBER NEWSLETTER
Page 4**

**2012 International SAMPE Technical Conference
Charleston, SC**

At the SAMPE Board of Directors Meeting held in Salt Lake City on October 11, 2010, the New Jersey Chapter of SAMPE was awarded Major Sponsorship of the 2012 International SAMPE Technical Conference (ISTC) which will be held in Charleston, SC on October 22 to 25, 2012. A newly chartered Carolinas Chapter will be invited to join the New Jersey Chapter as the Minor Sponsor.

The Theme of the Conference is:

The New Composites: Innovative, Sustainable, Renewable

The New Jersey Chapter brings one of the most experienced and veteran teams in SAMPE history with respect to sponsorship of ISTC and ISS&E events. Mr. Ben Rasmussen will be the General Chairman, Dr. Howard Klinger, Dr. Louis Pilato and Mr. Borys Schafran will be the Technical Co-Chairman, Mr. John Osterndorf will be the Finance Chairman and Mr. Tony Constantino will be the Conference Exhibits Liaison.

NEW JERSEY IS NOW ON FACEBOOK

In addition to the Chapter's web page (<http://www.njsampe.org>), a new Facebook page has been launched at

<http://www.facebook.com/pages/NJ-SAMPE/120070431354474?filter=2>

With the popularity of social networking on the rise, NJ SAMPE is reaching out to students and young professionals with an interest in materials engineering. Facebook provides for 'virtual' participation in the activities of our Chapter, as well as a variety of discussions on newsworthy items affecting our industry. The Chapter has been active with monthly meetings and conference sponsorships since 1970, and we wish to expand our presence in the online community. Want to know more? Join the growing group of Facebook members that 'Like' our page and post your own thoughts. We welcome your participation and please, spread the word!

So visit our Facebook Page and get back to us with your recommendations and ideas and critiques. Please send them to Borys Schafran at borys.schafran@evonik.com.



**NEW JERSEY CHAPTER SAMPE
NOVEMBER NEWSLETTER
Page 5
NEW JERSEY SAMPE WEBSITE**

Visit www.NJSAMPE.org

We now have a website and we need lots of input and recommendations from you to make it useful. All of our sponsors have links to their sites. If you are a sponsor, please make sure it's linked to the right site. If you are a consultant and want your resume on line, we have a place for that too. Also on the website you will find a history of our chapter and our Bylaws. There's also a history of the Bridge Building contest, going all the way back to when it was only a high school contest.

So visit the website and get back to us with your recommendations and ideas and critiques. Please send them to Howard Kliger at hskliger@comcast.net.

**NEW JERSEY SAMPE
CORPORATE SPONSORSHIP**

The New Jersey Chapter is inviting you and your company to be a Corporate Sponsor of the Chapter. By being a corporate sponsor, you and your company enables the chapter to continue its educational endeavors such as the Bridge Building Contest at the SAMPE Symposium and Exhibition and hold monthly technical meetings. In addition, your contribution enables the chapter to publish the monthly newsletter, conduct one day seminars and sponsor international conferences and exhibitions. These activities have helped the chapter become one of the best chapters in SAMPE.

In addition, the Chapter has revised its newsletter to provide greater recognition of its sponsors. A sponsor's corner has been included for sponsors to highlight new product announcements, new business activities, processes and informative information concerning your company. Please submit any items for inclusion in the newsletter to me by email at sampejohn@yahoo.com.



NEW JERSEY CHAPTER NOVEMBER NEWSLETTER

Page 6

EXECUTIVE BOARD

CHAIRMAN:

Benjamin M. Rasmussen
BMR Associates
908-561-0796/fax: 908-753-7917
bmrassociates@netcarrier.com

VICE CHAIRMAN:

Gail D. DiSalvo
GTD Consulting
908-953-0849/fax: 908-766-6373
disalvogail@aol.com

TREASURER:

John F. Osterndorf
973-248-5885 (cell)
sampejohn@yahoo.com

SECRETARY:

Borys Schafran
Evonik Degussa Corporation
Tel 973-541-8172/fax 973-541-8161
borys.schafran@evonik.com

PROGRAMS:

Tony Constantino
Fiber-Line Inc
215-997-9181/Cell : 267-885-7144
tcconstantino@fiber-lineinc.com

MEMBERSHIP :

Jane Arlauskas
Evonik Degussa Corporation
973-541-8165
jane.arlauskas@evonik.com

DIRECTORS:

Howard S. Kliger
732-469-7646
hskliger@comcast.net
Louis A. Pilato
Pilato - Consulting
732-469-4057/fax: 732-764-9747
lapilato@optonline.net
Benjamin M. Rasmussen
BMR Associates
908-561-0796/fax: 908-753-7917
bmrassociates@netcarrier.com

PAST CHAIRMAN:

1977 – 1978 Raymond F. Wegman
1978 – 1979 William J. Russell
1979 – 1980 Michael Michno
1980 – 1981 Fred H. Ancker
1981 – 1982 Natalia Chujko
1982 – 1983 Robert J. Narsavage
1983 – 1984 Richard W. Reiter
1984 – 1985 Howard S. Kliger
1985 – 1986 John Burlage
1986 – 1987 John F. Osterndorf
1987 – 1988 Thomas J. Green
1988 – 1989 Harry S. Katz
1989 – 1990 Benjamin M. Rasmussen
1990 – 1991 Harry Tenney
1991 – 1993 Louis A. Pilato
1993 – 1994 John Burlage
1994 – 1995 Richard A. Walther
1995 – 1996 Frans van Anterpen
1996 – 1997 Kathleen A. Froelich
1997 – 1998 Gail D. DiSalvo
1998 – 1999 Ash Chopra
1999 – 2010 Benjamin M. Rasmussen

SAMPE FELLOWS:

1985 Raymond F. Wegman
1987 Dr. Carl H. Zweben
1989 Robert Pickney
1990 Dr. Frank K. Ko
1992 Fred H. Ancker
1993 Leonard Poveromo
1999 Dr. Howard S. Kliger
2001 Dr. Louis A. Pilato
2001 Harry S. Katz

SENIOR HONORARY MEMBERS:

Richard G. Adams
Edward A. Gallagher
Charles N. Muldrow
William D. Timmons
Raymond F. Wegman



**NEW JERSEY CHAPTER
NOVEMBER NEWSLETTER
CHAPTER SPONSORS**

Page 7

<p>ACTEGA Radcure, Inc. Jim Wittig 5 Mansard CT. Wayne, NJ 07470 Tel: +1 973 808 1002 Fax: +1 973 808 6886 jim.wittig@altana.com www.actega.com</p>	<p>A & P Technologies Andrew A. Head 4595 East Tech Drive Cincinnati, OH 45245 513-688-3200 Fax: 513-688-3201 ahead@braider.com www.braider.com</p>	<p>Engineered Fibers Technology Robert E. Evans 25 Brook Street Shelton, CT 06484 203-922-1810, X335 Fax: 203-922-1814 efiberstec@aol.com www.EFTfibers.com</p>
<p>Airtech International, Inc. Peter Grantham 5700 Skylab Road Huntington Beach, CA 95647 714-899-8100 Fax: 714-899-8179 pgrantham@airtechintl.com www.airtechintl.com</p>	<p>Alcan Baltek Corporation Marc A. Anderson 108 Fairway Court Northvale, NJ 07647 201-767-1400 Fax: 201-387-6631 marc.anderson@alcan.com www.alcanbaltek.com</p>	<p>Evonik Degussa Corporation Borys Schafran 379 Interpace Parkway Parsippany, NJ 07054 973-541-8172 Fax: 973-541-8161 borys.schafran@evonik.com www.evonik.com</p>
<p>Argosy International Inc. Paul Marks 14 Penn Plaza New York, NY 10001 (212) 268-0003, X101 pmarks@argosyinternational.com www.argosyinternational.com</p>	<p>Bryte Technologies Chuck Chakrabarti 1235 Beacon Hill Crossing Alpharetta, GA 30005 (770) 475-7977 Fax: (770) 475-7477 cchakrabarti@brytotech.com www.brytotech.com</p>	<p>Fabric Development Inc. Mary P. Shafer 1217 Mill Street Quakertown, PA 18951 215-536-1420 mshafer@fabricdevelopment.com www.fabricdevelopment.com</p>



**NOVEMBER NEWSLETTER
CHAPTER SPONSORS
Page 8**

<p>General Magnaplate Edmund Aversenti 1331 US Route 1 Linden, NJ 07036 908-862-6200 Fax: 908-862-6110 eaversenti@magnaplate.com www.magnaplate.com</p>	<p>Kenrich Petrochemicals Mr. Salvatore J. Monte 140 East 22nd St., POB 32 Bayonne, NJ 07002 201-823-9000 Fax: 201-823-0691 sjmonte@4kenrich.com</p>	<p>Northern Fiber Glass Sales Richard Hewitt PO Box 2010 Hampton, NH 03843-2010 603-926-1910, ext. 16 Fax: 603-926-0598 rvh@nfgsales.com www.NFGSales.com</p>
<p>Gerber Technology Inc Dudley Fenn 24 W. Industrial Park Road Tolland, CT 06084 860-871-8082 Fax: 860-871-3730 dfenn@gerbertechnology.com</p>	<p>Loctite Corporation George Newton 1001 Trout Brook Crossing Rock Hill, CT06067 315-492-7571 george.newton@us.henkel.com www.loctite.com</p>	<p>Prince Sports Incorporated Steve Davis One Advantage Court Bordentown, NJ 08505-7620 609-291-5800 stevedavis@princesports.com www.princesports.com</p>
<p>GTD Consulting Gail DiSalvo 127 Rippling Brook Way Bernardsville, NJ 07924 908-953-0849 Fax: 908-766-6373 gail.disalvo@att.net</p>	<p>Lonza Group Sajal Das 90 Boroline Road Allendale, NJ 07401 201-316-9218 sajal.das@lonza.com www.lonza.com</p>	<p>Utility Development Harry Katz 112 Nylon Road Livingston, NJ 07039-1006 973-994-4334 Fax: 973-994-3341 Harryskatz@aol.com www.udccorp.com www.radcure.com</p>
<p>Henkel Aerospace Michael Portwood 2850 Willow Pass Road Bay Piont, CA 94565 925-458-8000 Cell 717-817-1532 Michael.portwood@us.henkel.com www.aerospace.henkel.com</p>	<p>Mektech Composites Inc. Aram Mekjian 40 Strawberry Hill Road Hillsdale, NJ 07642 201-666-4880 Fax: 201-666-4303 mekmail@prodigy.net</p>	<p>3M Aerospace Renee Rainboth 3M Center St. Paul, MN 55144-1000 (856) 769-8565 Fax: (856) 769-8566 rarinboth@mmm.com www.3m.com</p>

