

SOCIETY FOR THE ADVANCEMENT OF MATERIAL AND PROCESS ENGINEERING

NEW JERSEY CHAPTER

NOVEMBER NEWSLETTER & MONTHLY NOTICE NOVENBER 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:

 $\underline{ISSE-1990}(\ \mathrm{Anaheim}\),\ 1994(\ \mathrm{Anaheim}\),\ 1996(\ \mathrm{Anaheim}\),\ 1998(\ \mathrm{Anaheim}\),\ 2002(\ \mathrm{Long}\ \mathrm{Beach}\)$

 $\underline{ISTC}-1981 (\,\mathrm{Mt.\,Pocono}\,),\,1989 (\,\mathrm{Atlantic\,City}\,),\\ 2006 (\,\mathrm{Dallas}\,),\,2009 (\,\mathrm{Wichita}\,)$

ISEC – 1994(Parsippany)





NEW JERSEY CHAPTER SAMPE NOVEMBER NEWSLETTER Page 2

2010 – 2011 MEETING SCHEDULE

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

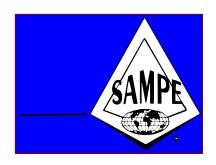
OCTOBER MEETING

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

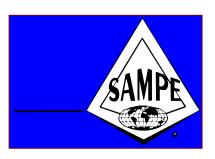
Email: obdulia.ley@mistrasgroup.com Phone: 609-716-4042/Fax: 609-716-4057

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 Kliger, 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.

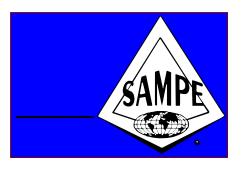
NEW JERSEY IS NOW ON FACEBOOK

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

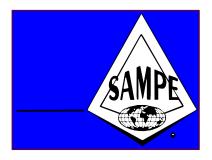
We now have a website and we need lots of input and recommendations from you to make it useful. All of our sponsors have links to their sites. If you are a sponsor, please make sure it's linked to the right site. If you are a consultant and want your resume on line, we have a place for that too. Also 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

disalvogaild@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

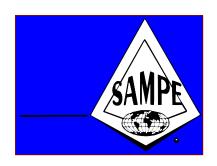




NEW JERSEY CHAPTER NOVEMBER NEWSLETTER CHAPTER SPONSORS

Page 7

1450 /						
ACTEGA Radcure, Inc.	A & P Technologies	Engineered Fibers Technology				
Jim Wittig	Andrew A. Head	Robert E. Evans				
5 Mansard CT.	4595 East Tech Drive	25 Brook Street				
Wayne, NJ 07470	Cincinnati, OH 45245	Shelton, CT 06484				
Tel: +1 973 808 1002	513-688-3200	203-922-1810, X335				
Fax: +1 973 808 6886	Fax: 513-688-3201	Fax: 203-922-1814				
jim.wittig@altana.com	ahead@braider.com	efiberstec@aol.com				
www.actega.com	www.braider.com	www.EFTfibers.com				
	Alcan Baltek Corporation	Evonik Degussa Corporation				
Airtech International, Inc.	Marc A. Anderson	Borys Schafran				
Peter Grantham	108 Fairway Court	379 Interpace Parkway				
5700 Skylab Road	Northvale, NJ 07647	Parsippany, NJ 07054				
Huntington Beach, CA 95647	201-767-1400	973-541-8172				
714-899-8100	Fax: 201-387-6631	Fax: 973-541-8161				
Fax: 714-899-8179	marc.anderson@alcan.com	borys.schafran@evonik.com				
pgrantham@airtechintl.com	www.alcanbaltek.com	www.evonik.com				
www.airtechintl.com						
Argosy International Inc.	Bryte Technologies	Fabric Development Inc.				
Paul Marks	Chuck Chakrabarti	Mary P. Shafer				
14 Penn Plaza	1235 Beacon Hill Crossing	1217 Mill Street				
New York, NY 10001	Alpharetta, GA 30005	Quakertown, PA 18951				
(212) 268-0003, X101	(770) 475-7977	215-536-1420				
pmarks@argosyinternational.com	Fax: (770) 475-7477	mshafer@fabricdevelopment.com				
www.argosyinternational.com	cchakrabarti@brytetech.com					
	www.brytetech.com					





NOVEMBER NEWSLETTER CHAPTER SPONSORS Page 8

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