

Chairman's Message

Hello everyone, hope you all are enjoying the nice spring weather as much as I am on my new Motorcycle. Yes winter is finally gone and it is time to get back to my favorite Rubber Group project – our Mixing Symposium. This year is the fourteenth year of the mixing course. We are hoping for another successful year and you can help by promoting the course to your associates and colleagues. Information and registration forms can be found on our website ctrubbergroup.org. Anyone wanting to participate at the Mixing Course as a host at our Hospitality Suite or just to attend the Wednesday Banquet please let us know (there will be a fee for the dinner).

By the way, if you haven't had a chance to check out our website please do, special thanks to Art Delgrosso and our web designers at RT Vanderbilt. I would like to thank Tom Jablonowski for his efforts at the Spring Technical Session, the excellent program put together by Tom lead to increased attendance.

Also a friendly reminder to send in your dues, if you haven't done so yet you will soon be removed from the mailing list and will miss out on any and all information regarding our Group. I would like to encourage your participation in our Rubber Group, please give it thought I can guarantee it will be a rewarding experience. If you or anyone in your company would like more information please feel free to contact me or anyone listed on the Contact Sheet. Looking forward to hearing from you.

Sincerely,
Mike DiGiovanni

2003 Connecticut Rubber Group Chairman

Paid your dues yet?

If not, send your check along with the application form contained in the previous edition of this newsletter, as soon as possible. You need to be a paid member to continue to receive mailings (for the golf outing and technical meetings) and be eligible to sponsor scholarship applicants, and receive this Newsletter.

If you need a membership application, contact the newsletter editor, any board members or our web site.

Unsure if you have paid your 2003 dues? Contact your CRG Treasurer, Juan Cardona at:

jcardona@longwoodindustries.com

Reserve these dates!!!

Mixing Course

June 3 - 5, 2003

2003 CRG Mixing and Continuous
Extrusion Course will be held at:
**The Marriott Courtyard,
Waterbury, CT**

Golf Outing

Thursday June 19, 2003

2003 CRG Golf Outing will be held at:
The Tradition, Wallingford, CT

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Meetings 2003 and beyond:**ACS Rubber Division**

October 14 – 16 Fall Meeting –
Cleveland, OH
May 17 – 19, 2004 Spring Meeting –
Grand Rapids, MI

Connecticut Rubber Group

June 3 – June 5 Mixing, Extrusion and Continuous Vulcanization Symposium
June 19 Golf Outing/Annual Membership Meeting
November 6 Tristate Technical Meeting

ANNUAL MIXING COURSE

Our Annual Mixing Symposium is scheduled for June 3-5, 2003. This year we will retain the very successful addition of Extrusion and Continuous Vulcanization on the course agenda. Most of the original course subjects are maintained while adding this new and exciting portion to the course.

In addition to the material presented, this is an excellent opportunity to network with others in the industry who share the same daily challenges of the Rubber Industry. The course fee includes daily lunches, morning and afternoon coffee breaks as well as a Banquet Dinner Wednesday evening. We would like to see attendance levels of 70-90 people, this allows us to give the individual attention to our attendees while maximizing our income potential.

This function is our prime fundraiser and allows us to give multiple scholarships. We need everyone in the group to help promote the course. If anyone is interested in attending the course please contact anyone on the Symposium Committee and we can answer any questions. Come join in the fun and educational experience.

Mike DiGiovanni

CRG Chairman and
Mixing Symposium Committee Chairman

AREA DIRECTOR'S REPORT

Spring 2003

The Rubber Division Meeting in San Francisco, was an interesting meeting. It had fairly low attendance, less than 400 the last I heard, probably due to the belt-tightening in the rubber industry and the cost of going to SF. I hope everyone is saving their money for attending the Rubber Expo/Fall Meeting in Cleveland. The papers I attended were generally good, and anyone who is able to attend a Rubber Division meeting should, from an educational standpoint.

I attended, for the first time, the 25-Year luncheon, an event open to anyone who's been in the industry 25 years. It's hard to believe it's been 29 years since starting in this business . . . For anyone who's been in the industry 25 years or more, I heartily recommend trying to get to one of these gatherings. It's good to rub shoulders with many of the elder statesmen of the rubber industry.

I also attended the Science and Technology Awards Banquet where the following awards were presented:

- ✦ Melvin Mooney Distinguished Technology Award –
Dr. Walter Waddell
- ✦ George Stafford Whitby Award – Dr. Sadhan K.
De
- ✦ Fernley H. Banbury Award – Dr. Bryan Willoughby
- ✦ Charles Goodyear Medal – Dr. Graham Lake

Two of the awards have local ties in that Crompton Corporation sponsors the Melvin Mooney Award, and Farrel Corporation sponsors the Fernley Banbury Award.

Significant events from the Executive Committee meetings were:

1. One of the undergraduate scholarships the Rubber Division awards will be designated the Dr. Emmanuel Kontos Memorial Scholarship.
2. The Rubber Division, in trying to balance its budget, is raising fees for many of the library services.
3. In a similar vein, because of the cost of printing hard copies of Rubber Chemistry and Technology, they will provide with your Rubber Division membership only the online RCT journal; if you want a hard copy there will be a significant charge for it.

I hope you all can make the Fall Meeting of the Rubber Division, which includes Rubber Expo. This will be held in Cleveland October 14-17. As is usually the case, the host and nearby hotels book up very quickly for this meeting, so if you're thinking of going, don't delay in making your reservations when the meeting notice comes in the mail

Meetings for the next two years are:

- 2004: May 17-19, Grand Rapids, MI;
October 5-8, Columbus, OH
- 2005: May 16-18, San Antonio, TX;
November 1-4, Pittsburgh, PA

Please let me know if you have any concerns that should be forwarded to the Rubber Division and I'll make sure your voice is heard

Tom J ablonowski

Area Director 2003



The Connecticut Rubber Group

Subdivision of the Rubber Division of the American Chemical Society

In Conjunction with the Farrel Corporation, Uniroyal Chemical and Davis-Standard (Crompton Businesses), Cober Electronics, and R. T. Vanderbilt Company sponsors a

SYMPOSIUM ON MIXING, EXTRUSION AND CONTINUOUS VULCANIZATION OF ELASTOMERIC COMPOUNDS

An intensive 3-day course to be held on June 3, 4, 5, 2003 at The Courtyard by Marriott, Buckingham Square, Waterbury, Connecticut

Enrollment is limited to the first 90 persons remitting payment.

Symposium Topics Include:

- Mixing Machinery for Polymeric Compounds
- Comparing Tangential and Intermesh Mixers
- Principles of Extrusion
- Farrel Corporation Plant Tour
- Compounds for Continuous Vulcanization
- Analysis of Mixing Cycles and Procedures
- Preventing Polymer Degradation During Mixing
- Formulating and Mixing of EPDM Compounds for CV
- Mixing and Curing Silicone Compounds
- Operation/Maintenance of Mixing Equipment
- Tour of a Local, Operational CV Line
- Crosshead Extrusion of Rubber Rollers
- Processing Solid Urethane & EPDM/Silicone Elastomers
- Principles of Microwave Curing

Course Fee \$550.00 payable to The Connecticut Rubber Group (\$500.00, if paid by 4/1/2003). Fee includes a bound course curriculum, the latest edition of the R. T. Vanderbilt Handbook, one year free dues for first time members to the Rubber Division, A.C.S. (Normally \$44.00), three lunches and continental breakfasts, one group dinner, and morning and afternoon coffee breaks.

Accommodations: Call Courtyard by Marriott, 63 Grand Street, Waterbury, CT 06702 Phone (203) 596-1000. Discount rate for attendees is \$79.00 per night plus tax, single or double. Mention that you are with CRG.

(Accommodations are not included in the course fee.)

To Enroll: Mail check and completed form below as soon as possible to:

Mr. Ray Cash, R. T. Vanderbilt Company, Inc.
30 Winfield Street, Norwalk, CT 06855

Phone: (203) 853-1400
Fax: (203) 853-1452

Name: Ms. Mrs. Mr.

Title: _____

First Name Middle Name Last Name

Company Name: _____

Business Address: _____

List the one issue that you would like to have this course address: _____

Daytime Phone: () E-mail _____

Full time student rates are available. Additional discount of \$25.00 per person available for 3 or more persons from the same company. No refunds after 4/30/03.

From the Historian's Corner

For my presentation on the History of the CRG at the Spring Meeting on April 10, 2003, I received the book *Noble Obsession*, by Charles Slack. This book is a tale of how a single-minded genius, Charles Goodyear, risked his own life and his family's in a quest to unlock the secrets of rubber, and how Thomas Hancock, a brilliant English inventor, ruthlessly sought to claim Goodyear's discovery for himself. The story abounds with colorful historical figures of the nineteenth century including Rufus Choat and Daniel Webster, who came to Goodyear's defense in the courtroom.

The world had never seen such a substance. Bouncy, stretchable, and moldable – rubber seemed like the miracle stuff of the early nineteenth century. But a major problem soon became clear – it melted in summer and cracked in winter. It would take one obsessed genius – Charles Goodyear – willing to endure years of poverty, hunger, and imprisonment, to reinvent rubber into the indispensable substance it is today.

Although I haven't completed reading this book, I wanted to at least share its compelling preface.

*Preface to Noble Obsession **

Rubber is everywhere today. It is as common as the sole of your shoe, the washer in your kitchen pipe, the elastic band holding your daughter's ponytail in place. Rubber has paid a price for ubiquity – we hardly give it a thought.

When we do think of rubber, it is certainly not on the order of a miracle. And yet that's exactly how rubber was greeted when it started appearing in large quantities in port cities of Europe and the United States during the early part of the nineteenth century. In a world dominated by wood, iron, steel, canvas, and leather, this bewitching substance that seeped from tropical trees was unlike anything else. It was pliant, airtight, and waterproof. It could be molded or spread on cloth. It absorbed shocks, would not conduct electricity, and could stretch to many times its length, only to snap back into its original shape.

Europeans had known about rubber and marveled at its properties since the early sixteenth century, but they never knew quite what to do with it. Rubber patiently awaited its time of glory. That time came with the dawning of the industrial age. The nineteenth century, with its newer and ever larger machines, cried out for just such a material. Although the first practical use for rubber was in clothing, engineers quickly realized its irreplaceable value in preventing a rapidly industrializing world from dashing itself to bits. Rubber springs cushioned the rides of railroad cars and carriages; rubber seals and gaskets prevented leaks and explosions; rubber belts made huge gears mesh smoothly; rubber packing

kept machines from rattling apart. Rubber became the great shock absorber of the industrial age.

Likewise, few of the industrial developments that defined twentieth – century life (and continue to define life in the twenty-first) could have happened without rubber. The automobile's dependence on rubber for tires, hoses, belts, and seals is so well known that it almost goes without saying. Tires still consume half of the world's supply of rubber, both natural and synthetic. But electrical power, telephones, and modern plumbing could not have been brought to millions of people without rubber to insulate and seal. Powered flight could not have taken off without rubber. To this day, virtually every machine that rolls off an assembly line (usually on a rubber conveyor belt) contains crucial components made of rubber. Think of a world without phones, lights, plumbing, airplanes, and the family minivan. Think of a world without soccer balls, footballs, golf balls, basketballs, and tennis balls. Think of a world without soft mattresses, springy carpets, diving suits, running shoes, condoms, and balloons. Think of a world without all of these things and you would have a world without rubber.

Actually, that might have happened. From the start, rubber had a near-fatal flaw, one so vexing and stubborn that early experimenters puzzled over it for years to no avail. But for the obsession of one man in the United States, and his competitor in England, the world might be a very different place.

Once thing needs to be said up front: Charles Goodyear, the American in this story, didn't start the tire company. The Goodyear Tire & Rubber Company was started by people he never knew, in a city he never visited, thirty-eight years after his death. Given the understandable (and not entirely accidental) confusion on this point, it bears mentioning that among the hundreds of potential uses for rubber envisioned by Charles Goodyear, the automobile tire was one he never foresaw, for the simple reason that the automobile had yet to be invented.

I hope you enjoyed reading this introduction.

As the Historian of the CRG, I encourage the long-time members to write their versions of the Connecticut rubber industry history. These may be sent to me at any time for preservation in the Historian record and for publication in future Newsletters. Also any photographs or artifacts and historical material may be sent to me. They will be stored in a clean, dry location for preservation.

Ralph

Ralph Annicelli, Historian

* Reprinted from *NOBLE OBSESSION: Charles Goodyear, Thomas Hancock, and the race to Unlock the Greatest Industrial Secret of the Nineteenth Century*, by Charles Slack. Copyright (c) 2002 Charles Slack. Published by Hyperion.

The Spring 2003 Technical Meeting

was held April 3rd at Rapps Paradise Inn

Tom Jablonowski of Crompton Corporation illustrated *Using the Internet as a Research Tool in the Rubber Industry*. On-line examples were shown of rubber-related sites for suppliers, organizations and manufacturers. Supplier sites have current product offerings and contacts. Several sites provide fluid resistance guides, some specializing in a certain polymer such as fluoroelastomers. One site shown has the comprehensive solvent resistance guide developed by the Los Angeles Rubber Group. Two manufacturers have rubber glossaries and several have elastomers use guides posted on their web sites. For more information, see: Tom.Jablonowski@cromptoncorp.com

Dr. Myer Ezrin with the Institute of Materials Science at the University of Connecticut spoke on *Troubleshooting Rubber Processs and Product Failures*. The major factors in rubber failure were grouped into material, design, processing and service conditions. While we are all aware of the intentional additives put into rubber compounds, Dr. Ezrin gave examples of unintentional additives that can impact rubber failure. The five broad mechanisms of rubber failure were indicated to be overload, fatigue, environmental degradation, anomalies (internal or external irregularities) and a combination of the other four. Several real-life examples of specific product failures were discussed, including how IMS Associates has identified the factors and mechanisms involved. For more information contact: myer.ezrin@uconn.edu

Joel Neilson of Sid Richardson presented three studies in EPDM on the effect of carbon black particle size and structure. Three new blacks with lower tint values were shown to have broader particle size distribution that leads to higher resilience and lower heat buildup. For more information, see: jgneilsen@sidrich.com

After dinner, Ralph Annicelli, the CRG historian, showed pictures from past meetings through to the present. It was fun to try to remember the names of many familiar faces.

New Website Launched

We are pleased to announce the completion of our website which can be viewed by clicking on to www.ctrubbergroup.org.

You can now easily review our Chairman's vision, upcoming events in 2003, membership & scholarship application forms, past newsletters, our historian's corner and our complete contact list of officers and the various chairman positions.

You can also use our site to link up with the ACS, Rubber Division, Rubber & Plastic News, Rubber World and the Naugatuck Historical Society. Just click on to our "Links" section.

We encourage you to take a look at this new website and commenting on what else can be added to make this more useful to our membership. All comments can be sent to Art Delgrosso at artdel@rtvanderbilt.com.

Connecticut Rubber Group Newsletter

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