



AUTOMOTIVE PLASTICS *News*

A PUBLICATION OF THE AUTOMOTIVE DIVISION OF THE SOCIETY OF PLASTICS ENGINEERS

June 2008 - Volume 37, Issue 3

For the 8th time in as many years, a global audience of speakers, exhibitors, and attendees are expected to converge on the Automotive Composites Conference & Exhibition - now the world's leading forum for automotive composites. This year's event - which is co-sponsored by the Automotive and Composites Divisions of SPE - will be held September 16-18 at the MSU Management Education Center in Troy, Mich., a suburb of Detroit.

The conference regularly draws exhibitors, speakers, and attendees from Europe, the Middle East, and Asia / Pacific as well as North America. Despite a slow automotive market in North America, the 2007 show again drew a crowd of over 400 - roughly half of which identified their employer as a transportation OEM or tier supplier and who traveled from 14 different countries on 4 continents to attend the show.

Road to Lightweight Performance

This year's conference theme is "*The Road to Lightweight Performance*," said Dale Brosius, chief-operating officer of Quickstep Technologies and returning event chair. "It reflects the progress transportation OEMs, tier suppliers, and composites producers have made in taking weight out and improving performance of vehicles by replacing metal and glass with lightweight, impact- and corrosion-resistant polymer composites."

"Sustained high fuel prices are convincing consumers to seek more energy-efficient vehicles, but they would prefer not to sacrifice safety, comfort, and performance as part of the bargain," added Dr. Frank Henning, director-Polymer Engineering, Fraunhofer Institut Chemische Technologie (ICT) and returning ACCE program vice-chair. "With the added pressure to increase fuel-economy standards,



advancements in engine technology and alternative powertrains like hybrids and fuel cells can only go so far. Making vehicles lighter with composites deserves equal consideration in closing the gap."

Technical Program Committee Now Reviewing Papers & Presentations

Those interested in speaking at this year's event should submit abstracts to the review committee via ACCEpapers@speautomotive.com. Full papers or presentations are due no later than June 30, 2008 to allow time for peer review - a one month's extension on the original due date of May 30.

Authors who have submitted papers (not presentations) in the proper format by the original due date will automatically be eligible for consideration for the conference's 3 Best Paper Awards, which will be presented during the event's opening ceremony.

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Treasurer's Report

John Fialka

The SPE Automotive Division bank account balance is in good standing with \$59K in checking and \$27K in savings. The 2007 Awards Program was a success with excellent attendance and sponsorship. The income for the 2007 Awards is \$178K. Expenses are \$163K with a net proceeds of \$15K.

Proceeds from this event supports scholarship and education outreach programs. In 2008, the Automotive Division has donated \$17,500 to the Plastivan and \$500 to SPE Student Award program.

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Automotive Division Meeting Schedule and Special-Events Calendar

Automotive Division Planning Meeting - ACC, Troy, MI	July 21, 2008 5:30 pm
Automotive Division Golf Outing Fieldstone Golf Club	September 8, 2008
Automotive Composites Conference & Exhibition (ACCE) - MSU Management Education Center Troy, MI	September 16-18, 2008
Division Board of Directors Meeting ACC, Troy, MI	September 22, 2008 5:30 pm
SPE Automotive TPO Global Conference - Best Western Sterling Inn, Sterling Heights, MI	October 5th - 8th, 2008
Innovation Awards Program Burton Manor, Livonia, MI	November 20, 2008
Division Board of Directors Meeting ACC, Troy, MI	December 8, 2008 5:30 pm

Automotive Division Board of Directors meetings are open to all SPE members, and are usually held at the **American Chemistry Council (ACC)** in Troy, MI. Call Tom Pickett at (586) 492.2454 for more information.

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Chairman's Message

Brian Grosser

It is amazing that the past year has flown by so quickly. It seems like only a month ago that I took over from Mark Lapain as your Chairman for the 2007-2008 fiscal year. What a year we have had, despite the extremely difficult economic times here in the Metro-Detroit area. I will summarize a few highlights to thank the teams who helped make it all happen along the way.

Our Golf Outing was another big success thanks to Fred Deans, who led the effort, and Terry Chouinard who helped with the sponsorship. Fieldstone Golf Club proved to be a nice test for our scramblers and I think the location helped raise the number of foursomes from the previous year. Look for more information on this year's event in this newsletter.

The Automotive Composites Conference was truly over the top last September. More attendees, more sponsors, more papers, and more networking than in any of the previous events. Congratulations to Dale Brosius, Peggy Malnati, and the whole team for putting on what was truly an outstanding event. It will be hard to top last year's conference, but I know that they will! If you missed it last year, I encourage you to attend this year's ACCE, which will be held September 16 – 18, 2008 at the MSU Education Center in Troy.

The Innovation Awards Gala was also spectacular last November and was attended by over 600 patrons. All of the finalists competed for the Grand Award, which went to General Motors for the Backlighting LEDs on the Chevrolet Tahoe SUV. Congratulations once again to our executive award recipients: Lawrence (Larry) Burns, vice-president of R&D at General Motors, who received the Global Executive Engineering Leadership Award; James Queen, group vice-president for Global Engineering at General Motors, who received the Executive Leadership Award; Josh Madden, who won the Lifetime Achievement Award, and Hiroaki Yamamoto, chief technology officer at Green Tokai Company, who received special recognition for Global Plastics Engineering.

Each award was well deserved and the presence of these people during the Awards night made the event even more special. Special thanks to all of the category captains and volunteers who made this such a successful event.

The 3rd-annual AutoEPCON show was held in April in Sterling Heights. This 1-day conference focused on engineering thermoplastics was very successful, with good attendance, sponsorship, and technical presentations. Greg Adams from Sabic Innovative Plastics gave the keynote address to a packed ballroom of attendees. Thanks to Tom Pickett and all of the others who made the 3rd AutoEPCON a charm.

I could go on and on about the year in review, but I will stop here and thank all of you for your support. The time and extra effort put out by all of our volunteers and members are what make this Society the success it is. I look forward to passing the baton to Tom Pickett next month and wish him well as he embarks on his year as the leader of this Division. Thank you all again for all you have done for me this past year. I look forward to seeing you all at our upcoming events.

Would you like to become involved in the SPE Automotive Division Board?

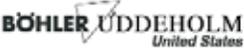
Become active in the SPE Automotive Board. It is an opportunity to network with others in the industry and help organize events that promote & educate everyone about the benefits of plastics in the Automotive Industry.

Our SPE Automotive Division Planning Meeting is Monday, July 21, 2008 5:30PM to 8:00PM at the American Chemistry Council, located at 1800 Crooks Road Troy, MI. There will be a free catered dinner for all attendees. We will be reviewing the different events that we are planning for the year. Thus, it is a great opportunity to attend the meeting and see if there are any events that you would like to volunteer and help organize. Come check it out!

If you like to attend the July 21st SPE Automotive Division Planning Meeting please contact Tom Pickett at 586-492-2454 or e-mail tomjpickett@yahoo.com so we can make sure we arrange for the proper amount of dinners. If you do not have an opportunity to contact Tom, then just show up. We look forward to seeing you at the planning meeting!



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Automotive Composites Conference and Exhibition

Continued from page 1

Currently, 10 technical tracks are planned for the conference:

- ◆ Advances in Thermoset Composites
- ◆ Advances in Thermoplastic Composites
- ◆ Bio- & Natural-Fiber Composites, Plus Recycling Composites
- ◆ Bonding, Joining, & Finishing of Composites
- ◆ Composites in Trucks
- ◆ Enabling Technologies
- ◆ Nanocomposites
- ◆ New Composite Materials & Processing
- ◆ Structural Composite Applications
- ◆ Virtual Prototyping & Testing of Composites

'07 and '01 Content from ACCE CDs Now Posted on Automotive Division Website - Access 7 Years of Papers & Presentations Free of Charge, 24/7

Last year, for the first time, papers and presentations as well as program guides from SPE ACCE conferences were made available for viewing and downloading on the SPE Automotive Division's website at www.speautomotive.com/rc.htm. This large body of technical material is offered online 24/7 at no cost in order to benefit OEM engineers, tier suppliers, material suppliers, industry consultants, university students studying composites technologies, and members of the media. Content from the 2007 and 2001 conferences has just been added to the site along with copies of the program guides used at those events.

The papers and presentations cover such materials technologies as long-fiber reinforced thermoplastics (LFRT), glass-mat thermoplastic (GMT), natural-fiber composites, bio-composites (using non-petroleum feedstock), nanocomposites, sheet-molding compound

(SMC), and advanced carbon-fiber composites. Topics covered include novel fabrication technologies, finishing, paint films, virtual prototyping and testing of composites, structural applications, and new uses for composites in ground-transportation applications.

The papers have been submitted by representatives from transportation OEMs, tier suppliers, materials and additive / reinforcement suppliers, machinery OEMs, government / academic labs, media, and consultants from around the world. SPE previously sold copies of ACCE conference CDs for \$100 USD per CD per year.

Applications Being Accepted for 2nd-Annual ACCE Scholarship

The ACCE organizing committee will again bestow two \$2,000 USD scholarships for graduate-level research in polymer composites that has impact on ground transportation. Shares of the proceeds from last year's SPE ACCE are funding this year's scholarships.

Students interested in applying will find a Scholarship Application form available for downloading at www.speautomotive.com/comp.htm. Applications should be submitted electronically to ACCEpapers@speautomotive.com by June 30th for awards to be announced in early August. Winning students are required to report on the results of their findings during the 9th-annual SPE ACCE, which takes place September 15-17, 2009. Winners will be selected from the pool of qualified applicants by conference committee members and representatives from General Motors, Ford Motor Company, and Chrysler LLC.

This is the second year conference organizers have offered scholarships. In 2007, two awards were made in honor of



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journalist and composites-industry insider, Steve Loud who passed away in 2006. The recipients were Mr. Roston Elwell from Texas A&M University (College Station, Texas) for research on the use of active-core composite sandwich panels; and Mr. Alejandro Londono-Hurtado from University of Wisconsin-Madison (Madison, Wisc.) whose work involves application of computer simulation and numerical modeling to predict variations in fiber orientation and density distribution during molding of fiber-reinforced automotive parts. Both scholarship winners will report their findings at the 2008 SPE ACCE.

Best Paper Awards to be Given Again at Show

For a second year in a row, peer reviewers will not only be checking technical content and watching for excessive commercialism when they review manuscripts for the conference, but will also be helping select three papers that merit the conference's Best Paper Awards. The awards will be presented during the conference's opening ceremony. One award each will be given in the categories of New Materials; New Processing / Enabling Technologies; and New Composite Applications. Winning authors will be notified in August and will receive a special plaque and peer recognition during the opening ceremonies.

Last year, Best Paper Awards were given to the following papers, which are being run (in shortened form) in this year's newsletter.

In the category of Processing / Enabling Technologies, the winning paper is titled Development of a Tool to Measure Bond-Line Read-Through and was authored by the team of Kedzie Fernholz (presenter) and Kim Lazarz, Ford Motor Company; C.S. Wang, General Motors Corporation; Bob Emerson and Dave Biernat, Chrysler LLC; Reda Hsakou, Visuol Technologies; and Darryl Case, EOS Technologies. (This paper is being reprinted in this issue.)

In the category of Composite Applications, the paper judged best by reviewers is titled Pedestrian Safety Validation of a High-Performance Thermoplastic Composite Hood by the writing team of Derek Buckmaster, GE Plastics and Tae-Won Hwang, Hyundai Kia Motors. (This paper ran in the March issue of the Automotive Division newsletter.)

In the category of New Materials, the winning paper is titled Effect of Additives on the Structure and Properties of Wheat Straw-Polypropylene Composites and was authored by the team of Paula Kruger and Leonardo Simon from the University of Waterloo's Department of Chemistry. (This paper will run in the September issue of the Automotive Division newsletter.)

Keynote Addresses Show Diversity of Composites Opportunities

Another popular aspect of the conference is the keynote speaker program. The planning committee attempts to find a mix of automotive-composites topics as well as speakers



Despite a slow North American auto market, the SPE ACCE show once again drew over 400 attendees from 14 countries on 4 continents in 2007. Event organizers hope to exceed last year's attendance figures when the show reconvenes for its 8th time from September 16-18, 2008.

from other industries that make significant use of composites. This year, the planning committee has commitments from the following speakers / organizations on topics that should be of interest to most attendees:

- ◆ Keith Bihary, Molded Fiber Glass Companies & David Dyke, Meridian Automotive Systems: Thermoset Composite Applications for Composite Vehicles;
- ◆ Barbara Sanders, Delphi Corp.: History of Automotive Composites;
- ◆ Jan-Anders Mansen, EPFL: Composites in America's Cup Sailing;
- ◆ Gary Savage, Honda Formula 1 Racing: Composite Materials Technology in Formula 1 Motor Racing; and
- ◆ Scott Nielson, Trek Bikes: Trek's Use of Composites to Lightweight Racing Bikes.

Sponsorship is Going Well

Despite the difficult time the North American automotive industry has experienced the past few years, sponsorship has remained solid for this year's ACCE show. (See Sidebar for current list of sponsors and exhibitors.) According to Teri Chouinard of Intuit Group, ACCE Sponsorship co-chair, "Last year, we decided to move exhibits from various conference rooms to the ballroom to give sponsors more value. This brings exhibitors and attendees together in a single, centralized location so all displays get more traffic. It not only provides more of a "trade show" feel; but is a more convenient location for food and beverages during breakfasts, coffee breaks, and cocktail receptions." Lunch will be offered in the conference rooms previously used for exhibits.

Time to Register to Attend; SPE Members Save \$100 at the ACCE

The planning committee encourages anyone planning to attend the event to register early to avoid being stuck in long

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Automotive Composites Conference and Exhibition

Continued from page 5

lines the first day of the show. The registration form can be found at www.speautomotive.com/comp.htm. Getting an early and accurate attendance count helps show organizers with meal planning so we neither over- nor under-order food and beverages. It also helps us gauge how many registration packets to produce for the show.

Attendance fees - which had not been raised since 2005 when an extra day was added to the conference - went up slightly this year (an additional \$26 USD). The cost is now \$375 USD for SPE members (a \$100 USD savings off the regular attendance fees) and \$475 for non-SPE members. The non-member rate includes 1 year of membership in SPE, so many active members choose to renew at the conference to save \$18 on their membership dues.

The flat fee provides access to the exhibit area (with an estimated 35+ displays), an expected 60+ technical presentations, 6+ keynote addresses, all 3 days of the show and also includes 3 breakfasts, 6 coffee breaks, 3 lunches, and 2 evening network receptions, as well as a conference registration packet with the event's electronic proceedings, supplier literature, the conference program guide, a notepad and pen, all enclosed in a roomy woven polyester bag.

Check Automotive Division Website for Updates Often

The SPE Automotive Division website (www.speautomotive.com/comp.htm) is a good place to find forms, updates, contact information, and hotel discounts for the current year's show, as well as papers or presentations from prior years' conferences, so please check back often.



Hannes Fuchs of Multimatic Inc. demonstrates a carbon fiber-reinforced plastic (CFRP) decklid for the Ford Focus FCV, a fuel-cell demonstration vehicle deployed in 2004 to city governments and research organizations for real-world testing. The decklid, formed of solid and sandwich-panel CFRP, replaced steel for a 60% mass reduction while minimizing tooling costs on this very-low-volume vehicle.

2008 SPE ACCE Sponsors & Exhibitors as of May 12

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Injection Molding Magazine

Modern Plastics Worldwide

Plastics Technology Magazine

Polymotive

Ward's AutoInterior's Show

Ward's AutoWorld

SPE Automotive Division Golf Outing

This year the SPE Automotive Division and The Automotive Composites Alliance have joined forces to sponsor the SPE/ACA Golf Outing. The outing will be held at Fieldstone Golf Club, Auburn Hills, MI. The event will take place on Monday, September 8, 2008. The order of events will be:

10:00 am - shotgun start
(Box lunch at turn)
3:30 pm - buffet dinner
4:00 pm - award prizes

"This year's outing will be held at Fieldstone Golf Club. The course is in excellent condition," states Mark Lapain, Assistant Chairman - Golf Outing. "Of course there will be awards and prizes. Also, this year's contest rules have been downsized to streamline play and enhance course enjoyment," according to Shane Ferguson, Assistant to Assistant Chairman, Golf Outing.

This year we are adding sponsorship opportunities for various contests and holes. The sponsorship packages include a foursome, outing recognition, and prize awards. Teri Chouinard, Sponsorship Chairperson is co-ordinating this year's sponsorship program. Contact her for registration and sponsorship information - call 810.797.7242 or email teri@intuitgroup.com; or go to www.speautomotive.com to find out more and register online.

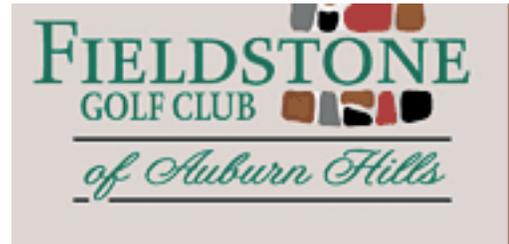
"The SPE/ACA golf outing has always been a "feel good" event. This year, we are going to make an even better 'feel good' event," states Fred Deans, Golf Outing Chairman-for-Life. (What a title!)



There are a number of promotional opportunities for interested companies. These include:

- ◆ Contest Hole Sponsorships \$1,000.00 includes a foursome, signage, commemorative prize and more.
- ◆ Hole Sponsorships \$750.00 includes a foursome and signage.
- ◆ Lunch Sponsorship \$2,000.00 includes two foursomes, signage and 100 flyers printed and distributed at the event to promote your company and/ or products.
- ◆ Dinner Sponsorship \$3,000.00 includes three foursomes, signage and 100 flyers printed and distributed at the event to promote your company and/or products. Also includes your company advertisement and/or message as a centerpiece on the dinner tables.
- ◆ Hole in One and Shootout Sponsorships are also available

Contact Teri Chouinard for more details.



Details on registration are:

Registration Fee - \$500.00/foursome (\$125.00 each)

Registration & Sponsorship Contact:

Teri Chouinard, Sponsorship

810.797.7242; teri@intuitgroup.com

Fred Deans, AD Golf Outing Chairman

248-760-7717; fdeans@alliedcomptech.com

Brian Czuchra, ACA Golf Chairman

440-997-513-5130, ext. 211; bczuchra@plasticolors.com

Contact us and we will send you a registration and payment form. Register soon!

Directions to Fieldstone Golf Club:

Fieldstone Golf Club is located in the city of Auburn Hills near Great Lakes Crossing and The Palace.

Traveling I-75 South exit 83 @ Joslyn Road, turn right traveling South on Joslyn, ½ mile on the left is Taylor Rd, turn left 1.5 miles down on Right to 1984 Taylor.

Traveling North on I-75, exit 81 @ M-24/Lapeer Rd., take south loop to Business M-24 Pontiac (right side), ½ mile on right entrance to Taylor Rd., Turn right, 1 mile to clubhouse on left.



"Composites On The Move - 2008™"

Composites Improve Strength, Corrosion Resistance, Design Appeal and Reduce Weight in Products and Equipment

Over 100 industry professionals, 17 sponsoring companies and 25 speakers supported the "Composites On The Move" Conference & Expo to educate industry on the benefits of composites at the National Composite Center in Kettering, Ohio. Four keynote speakers presented the latest composite technologies and opportunities relative to Wind Energy, Heavy Truck, Flame Retardants and Nanotechnology. Twenty-two additional presentations focused on opportunities for composites in Aerospace, Building & Construction and materials and processes that enable composites to provide light weight, high strength, corrosion resistance and design appeal benefits across a wide variety of industry applications.

Over 30 conference attendees attended the next-day tour of the Navistar Truck Plant (formerly International Truck and Engine Corporation) highlighting how composites are used in heavy truck manufacturing. COM 08 was produced by the SPE Composites Division, SPE Miami Valley Section and the National Composites Center.

COM 08 attracted OEM attendees in wind energy, building & construction, heavy truck and off-highway equipment. Non-automotive OEMs in attendance included representatives from John Deere, Milgard Windows &



Doors, Navistar (formerly International Truck Corporation), GE Wind Energy, Commercial Vehicle Group and Contech Bridge Solutions.

Supplier industries in attendance included representatives from DuPont, Dow, Magna, Ashland, Molded Fiberglass Group, Plasticomp. Conference Sponsors included: Allied Composites Technologies, Azdel, Inc., Composites One, Composite Products Inc., Continental Structural Products, Dueck & Associates Inc., Emabond Solutions LLC, Kurz-Kasch, Mar-Bal Inc., Meridian, Nida-Core, Owens Corning OCV Reinforcements, Perlane Sales, Inc., Ticona, Total Industries Int'l, Composites Technology Magazine and the ACMA (American Composites Manufacturing Association).

Material and Processes technologies presentations included: New Thermoplastic and Thermoset Technology, New Out of Autoclave Process, Sandwich Structures, Carbon Foams, Basalt Fibers, In-line Compounding of Long Fiber, Preforming for Engineered Fabrics, Carbon Fiber ATSP Composites for High Temperature Applications, Composites Bonding, Designing Composites Reliability, Film Transfer Technology and more.

SHOW US YOUR BEST OF SHOW

Time is speeding away.

Please submit your part nominations for
the *Most Innovative Use of Plastics* in
Automotive Applications for the
SPE Automotive Innovation Awards Competition.

Nomination forms are at
www.speautomotive.com/inno.htm.



SPE Automotive Division Issues Call for Parts Nominations

Oldest Competition in Auto & Plastics Industries Gets Underway for 38th Time

If it's June, then the planning committee for the SPE Automotive Innovation Awards Program is already hard at work preparing for this year's annual parts competition and awards gala - the oldest and largest recognition event in the automotive and plastics industries.

Plastics: Vision 20/20

Maria Ciliberti, SPE Automotive Innovation Awards chair for 2008, announced that the theme of this year's program is **Plastics: Vision 20/20**. "We selected this theme in view of the new fuel-economy standards that passed last year and that automakers will have to meet by the year 2020. SPE believes that plastics- and composites-intensive vehicles will be key to meeting these more stringent fuel-economy standards while maintaining safety and affordability."

Although this year's date is not yet set, the gala itself will be held on a weeknight during the first 3 weeks of November at Burton Manor in Livonia, a suburb of Detroit.

Time to Start Working on Those Nominations

The annual parts competition, which is the heart and soul of the Innovation Awards program, is underway and the review committee is starting to accept and review part nominations for Year's Most Innovative Use of Plastics in ground transportation applications. The deadline for receiving nominations is mid-September, but it is better to start working on the nominations early and submit them ahead of the deadline. The nomination form, along with a flier on the parts competition and a list of competition rules will be found at www.speautomotive.com/inno.htm.

"Too often, teams put off filling out the paperwork until the very last minute," explains Kevin Pageau, former SPE Automotive Innovation Awards chair and the current chair of the parts competition. "When they do remember, they throw together their nomination forms without taking time to really think through all the benefits their application offers each member of the supply chain. Then, a really worthy application doesn't get recognized because no one has taken the time to explain the benefits. Sometimes too we find the nominating team forgot to get OEM approvals - or didn't allow enough time to clear those approvals - so good applications have to be pulled from the competition. That hurts everyone."

Monica Prokopyshen, who runs the Blue Ribbon judging panel added, "Another challenge we frequently see is that teams put their presentations together last minute. They don't practice giving their pitch - perhaps thinking we aren't serious about the 5-minute time limit on presentations - so



when they have to present before the judges, they can't get all the information across in the time allotted. We really find that teams who make the effort to put their nominations and presentations together early and to practice, fare the best when facing the judges.

During the competition phase of the event, dozens of teams made up of OEMs, tier suppliers, consultants, and polymer producers work for months to hone submission forms and presentations describing their part, system, or complete vehicle module and why it merits the claim as the year's "Most Innovative Use of Plastics." Current categories include:

- ◆ Body Exterior,
- ◆ Body Interior,
- ◆ Chassis / Hardware,
- ◆ Environmental,
- ◆ Hall of Fame,
- ◆ Materials,
- ◆ Performance & Customization (Automotive Aftermarket),
- ◆ Process / Assembly / Enabling Technologies,
- ◆ Powertrain, and
- ◆ Safety.

Module on '07 Winners Now Available on Automotive Division Website

While the Innovation Awards page of the SPE Automotive Division website has listed the 2007 winning entries since November of last year, a new module of all the 2007 nominations was recently posted on the Resources Page at www.speautomotive.com/rc.htm. That page also holds modules with write-ups on all nominations received from 1999 through last year. It is a resource not only for OEMs and tier suppliers considering new applications in plastics, and media looking for stories to publish, but also should be considered a resource for this year's nominating teams to review when considering if any other OEM-tier team has previously nominated a similar part in the competition.

Please check back to the SPE Automotive Division website (www.speautomotive.com/inno.htm) for updated information on the event and for competition deadlines, forms, and other useful information.

SPE AUTOMOTIVE TPO GLOBAL CONFERENCE

OCTOBER 5TH THRU OCTOBER 8TH, 2008

Best Western Sterling Inn • Sterling Heights, MI



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CONFERENCE 2008.

Be part of the 10th Anniversary SPE Automotive Global Convergence.

This premier conference draws some of the world's most knowledgeable decision makers and industry experts that share their perspective and ground breaking developments in one of the world's fastest growing polymers.

TPOs have become an essential part of the automotive industry's quest for versatile, economical, light weight materials that meet the increasing challenges of the automotive industry.

Last year's conference attracted over 410 professionals sharing leading edge polymer and application technologies. This year, the 10th annual conference is expected to be even larger and includes a thermoforming session reflecting it's increasing roll in the transportation industry.

✓ AUTOMOTIVE APPLICATIONS DEVELOPMENTS

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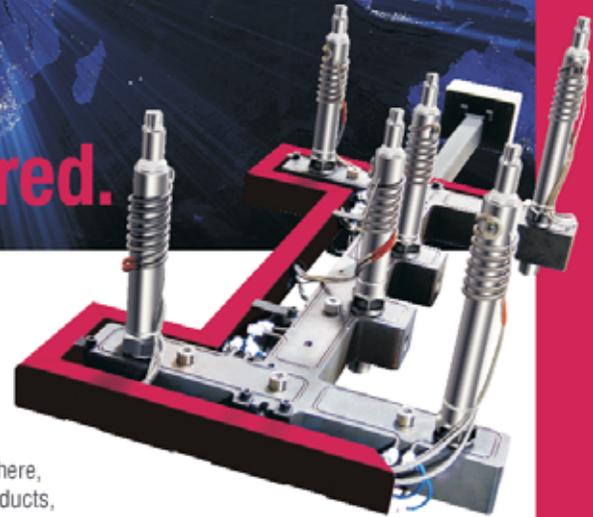


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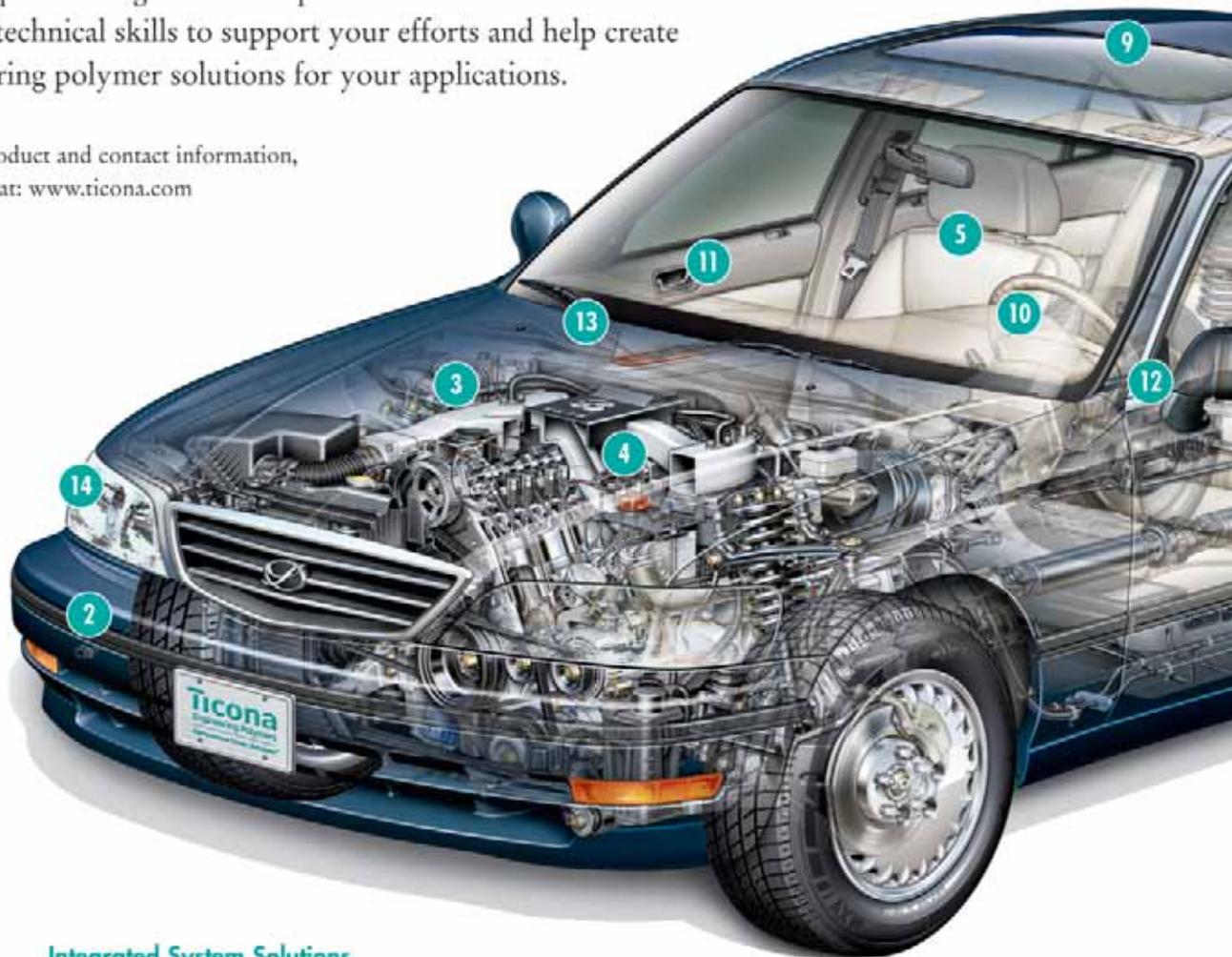
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The SPE Annual Technical Conference (ANTEC) along with the Plastics News' Plastics Encounter trade show was held in Milwaukee, Wisconsin at the Midwest Airlines Center May 3 - 7, 2008. The conference was kicked off on Sunday evening with the SPE Awards Celebration. The SPE Automotive Division received the prestigious Pinnacle Award, the highest award SPE National gives to a division. Congratulations! Also, our own Ron Price received Honorary Service Member Award. Congratulations to Ron on this well deserved award!

The ANTEC technical sessions started Monday morning. There were over 600 technical papers. The ANTEC Automotive session took place on Tuesday afternoon May 6th. Tom Pickett moderated the Automotive Session. There were eight technical presentations and one interactive paper on the latest developments in automotive plastic materials and applications. The Automotive session was well attended with over 210 attendees.

The Automotive Business meeting took place May 7th at 5:30PM directly following the Automotive session technical presentations. Tom Pickett, Jay Raisoni and Jim Keeler represented the Automotive Division BOD at the meeting and discussed the goals and activities of the Automotive Division with the Tricia McKnight from SPE International.

For more information about ANTEC, visit the SPE website: www.4spe.org



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AUTOEPCON

The SPE Detroit Section and the SPE Automotive Division joined together to hold the third annual Automotive Engineering Plastics conference, AutoEPCON 2008, on April 22nd at the Best Western Sterling Inn in Sterling Heights, Michigan. Over 210 attendees learned the latest developments and design of engineering plastics materials for automotive applications from 24 presentations, 14 exhibitors, a plenary speaker, and a keynote speaker.

In the opening remarks, Tom Pickett, Co-chair of the conference, welcomed the attendees and remarked that his co-chair Nippani Rao and he were thankful to all the SPE volunteers and sponsor companies that made the conference possible. The SPE volunteers were Norm Kakarala, Technical Chair; Gary Kogowski, Sponsorship Chair; Craig Dlugos, Exhibit Chair; Terry Cressy, Management Forum Chair; Ron Price, Communications Chair; Marty Angell, House & Registration Chair; and Pat Levine, Program Brochure Chair.

The volunteers that served on the different committees were: Sandra McClelland, Tom Miller, Suresh Shah, Jay Raison, Craig Bellissimo, Josh Madden, John Wahl, Maria Ciliberti, Brian Grosser and Cindy Hammer. The financial support and active participation from the five premier sponsors and the seven associate sponsors made the conference possible. The premier sponsors were: BASF Engineering Plastics, DSM Engineering Plastics, DuPont Automotive, SABIC Innovative Plastics, and Ticona Engineering Polymers.

The associate sponsors acknowledge were Adell Plastics, Asahi Kasei Plastics North America, A. Schulman, Chevron Phillips Chemical Company, CYRO/EVONIK Degussa Corp., JSP International LLC, and Solutia. In addition, the exhibit /advertising / break sponsors were: ENTEC Polymers, Moldflow, and Teijin Aramid USA.

Terry Cressy of DuPont introduced conference plenary speaker Eric Fedewa, VP Global Powertrain Forecasts from CSM. Eric talked on the CO2 Business Case for Mass Reduction. Eric pointed out that the increased CO2 emissions have led to legislation to address the issue. He discussed the CO2 reduction solutions and the strategy the different OEMs have taken. Eric explained that North America will shift away from trucks and SUVs to smaller vehicles.

Norm Kakarala of Inteva Products informed the attendees of the 24 technical presentations in two concurrent sessions. There were 12 presentations in the Material session that covered a variety of engineering plastic materials. There were also 12 presentations in the Design & Application Development session on a variety of under the hood and structural automotive applications.

Tom Pickett introduced the keynote speaker Greg Adams, Vice President of SABIC Innovative Plastics, Automotive Business. Greg discussed the role SABIC Innovative Plastics plans to play in the automotive industry. He discussed in challenging times there are opportunities to introduce innovative technology. Greg mentioned the work that Exatec is doing in glazing polycarbonate for automotive roof panels.

Following the key note address, the technical presentations resumed. The conference concluded with a networking reception. SPE looks forward to having the fourth annual AutoEPCON conference next April.



Development of a Tool to Measure Bond-Line Read-Through

Kedzie Fernholz - Ford Motor Company, Dearborn, MI
Réda Hsakou - Visuol Technologies, Metz, France
Kim Lazarz- Ford Motor Company, Dearborn, MI
C.S. Wang -General Motors Corporation, Warren, MI
Bob Emerson - Chrysler Corporation, Auburn Hills, MI
Dave Biernat - Chrysler Corporation, Auburn Hills, MI
Darryl Case - EOS Technologies, Auburn Hills, MI

This paper was originally presented at the SPE Automotive Composites Conference 2007.

Introduction

The appearance of an automobile's exterior is one of the most important factors to a customer when they are choosing which vehicle to purchase. Consequently, manufacturers work hard to ensure that the surface produced is the Class "A" surface intended. While there are many benefits to using adhesives in automotive body components, their use can cause distortion in a Class "A" surface. This distortion appears as a visible surface defect that has been termed "bond-line read-through" (BLRT).

There have been many efforts to determine what causes this distortion in a surface [1-4]. Unfortunately, the results of many experiments appear to contradict each other. This is most likely due to the fact that an instrument capable of objectively quantifying the severity of BLRT did not exist. Consequently, to conclusively determine the causes of BLRT and to develop a tool to model it, an instrument capable of objectively quantifying the severity of BLRT in a way that correlates to visual assessment needed to be developed.

Initial evaluation of the ONDULO technology by the Automotive Composites Consortium Joining Working Group (ACCJWG) demonstrated that while the output of the system is much more sensitive than the human eye, none of the metrics that already existed in that software produced a value that correlated to our visual assessment of the panels. Consequently, the ACCJWG collaborated with Visuol Technologies and EOS Technologies to develop a new metric capable of providing an objective measure of this defect.

The ONDULO Technology

The ONDULO technology is based on the principle of deflectometry. The basic principle of deflectometry is visible everyday. Consider the image in Figure 1. The windows of this building do not reflect the real design of the church. This illustrates the concept that by evaluating the distortion of a reflection on a surface, one can obtain information about the distortion in the surface itself.

The automotive industry applies the same principle to analyze the appearance of exterior body panels. A Class

"A" quality surface is defined as a high-quality surface with no undesirable waviness. Human inspectors look for distortion of a regular light pattern to determine whether there are any unacceptable defects in the panels. Unfortunately the inherent variability between human inspectors means that this subjective method of evaluating panels is not capable of ensuring a consistent, objective measurement of the quality of a surface.



Figure 1 - A Reflection on Building Windows.

Locally, any surface can be defined by the function $z = f(x,y)$. The slope of the surface can be defined by its components dz/dx and dz/dy . The slope variation from one point to the other is described by the two components d^2z/dx^2 and d^2z/dy^2 (the slope derivatives, or curvatures) as well as by the cross-derivative $d^2z/dxdy$ (the torsion). The torsion cross-derivative term will not be taken into account in the ONDULO calculations.

The importance of curvature to the apparent severity of a defect is illustrated in Figure 2. This figure shows two defects with identical altitude (cross-section z). The second defect, however, appears to be more severe because its curvature (cross-section d^2z/dx^2) is larger. Thus, the

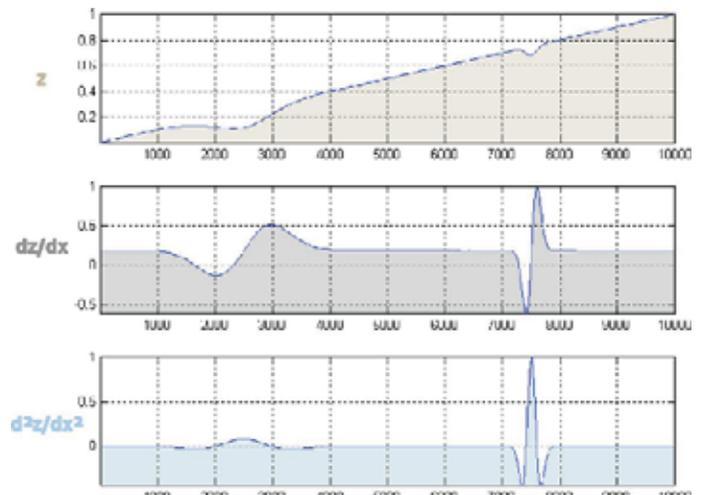


Figure 2 - Altitude, slope, and curvature of two defects with identical depth.

advantage of using deflectometry is that it allows the local curvature variation to be quantified and it is the local curvature variation that is the most relevant criterion for surface appearance analysis.

The ONDULO technology is designed to replace subjective visual evaluations with a non-contact optical technique. The goal of the measurement technique is to quantify the local distortion of the reflection for each pixel of an image of a surface by calculating the local curvatures. The curvature information from a surface can then be quantified in a way that is objective and correlates to subjective evaluations.

BLRT Samples

To develop an algorithm for calculating a value that correlates to the apparent severity of the BLRT defect using ONDULO measurements, the ACCJWG manufactured a set of panels with varying amounts of BLRT. Initially seventy-two panels were manufactured. A schematic of the panel geometry is shown in Figure 3. Three panels were fabricated using each set of conditions. One replicate was left in the "as-bonded" ("raw") state and the other two were primed. After priming, one of the two primed panels of each type was painted black.

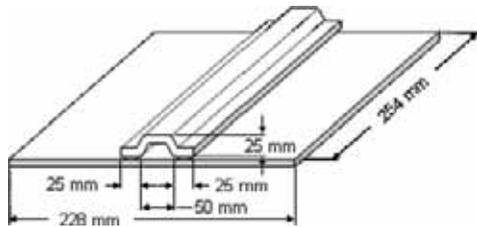


Figure 3 - BLRT Panel Schematic

After priming and painting, twelve panels from each condition ("raw", primed, and painted) were chosen. The panels included in the primed and painted sets were selected so that the set contained panels with a range of BLRT severities. BLRT was difficult to see with the unaided eye in the raw panels, so the raw panels chosen were those made using the same conditions as those in primed panel set.

Visual Evaluation of the BLRT Samples

BLRT was not visible to observers on the "raw" panels. This was not because BLRT was not present on the panels but rather because the surface characteristics of the panels made it difficult for the human eye to perceive the flaws. BLRT defects are difficult to see on raw panels because of the low level of reflection from the surface.

BLRT was visible on the twelve primed and twelve painted black panels. Due to space limitations, only the painted black panels will be discussed here. Although a thirty person jury ranked each set of panels to provide visual assessment data, interviews with the jury members found

that people had a tendency to count the number lines visible on the panels. Unfortunately, the number of lines that are visible on the panel have very little to do with the actual severity of each of the lines. Consequently, an "expert" jury was convened to establish "rules" for an acceptable panel ranking order. These "rules" are illustrated in Figure 4.

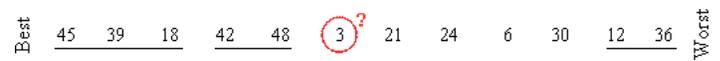


Figure 4 - Illustration of the Painted Panels Ranking by the "Expert" Jury

Figure 4 should be interpreted as follows. Panels 45, 39, and 18 should have the lowest scores, but can be in any order. Panels 42 and 48 must have a higher score than the first three, but can be in any order. In addition, the jury would not object if these panels had scores higher than those of 3, 21, 24, and 6. Panel 3 has small, circular defects at the ends of the bond-lines that are very visible. The jury could not confidently place this panel in one location in the ranking, but concluded that it should not be included in the "best" group or the "worst" group. Panels 21, 24, 6 and 30 should be in that order. Panels 12 & 36 should have the highest scores, but can be in either order.

The BLRT Metric

To establish a numerical BLRT "score", the data collected by the ONDULO system is filtered. There are a number of different types of filters available. The choice of the filter is critical since it will influence the defects that are included in the score and their relative weighting. Short wavelength features should be eliminated from the data since these are the result of general surface roughness and paint defects and, hence, are not related to BLRT. In addition, features with very long wavelengths should be excluded as well since these are due to shape defects to which our eyes are not particularly sensitive.

Once the wavelength range has been selected and the data has been filtered, the first mathematical operation performed is to identify which pixels in an image exceed a particular curvature amplitude threshold. By thresholding, the pixels that exceed the threshold are identified as possible defects. The challenge is to identify a threshold that corresponds to the defects that are "visible".

After pixels which exceed a selected threshold are identified, adjoining pixels are grouped as a single defect. Defects below a certain size, in mm², are omitted through a filtering operation. In addition, defects with a mean curvature amplitude below a secondary threshold are also omitted. These size and mean amplitude filters remove defects that are not related to BLRT and help to discriminate the apparent severity of the different bonding defects. The magnitude for the filters was chosen based on the appearance of the resulting "score map" and how well the resulting score correlated with the expert jury results.

Continued Page 18

Development of a Tool to Measure Bond-Line Read-Through

Continued from Page 17

The "best" algorithm available today first uses a Gaussian filter to reduce the raw the curvature data to features only in the 20-40mm wavelength range. Pixels with curvature amplitude greater than 0.06 m-1 were included as possible defects. Defects resulting from agglomeration of those pixels were included in the score calculation if the defect as a whole had a mean curvature amplitude of 0.075 m-1 and was larger than 100mm².

The algorithm rates the severity of a defect by calculating a "BLRT score". The score for an individual defect is calculated by multiplying the square of the defect's mean curvature amplitude by its size. The score for a panel is then the sum of the scores of all defects identified on the panel. The mean amplitude is squared in the calculation to ensure that the score for a small, high amplitude defect will be larger than the score a larger, lower amplitude defect since high amplitude defects are more visible.

Correlation of the BLRT Metric to Visual Assessment

Filtered images of all twelve black painted panels are shown in Figure 5. The black numbers on the bottom of each panel image are the panel ID numbers. The white numbers at the top of each image are the BLRT scores calculated by the algorithm described above.

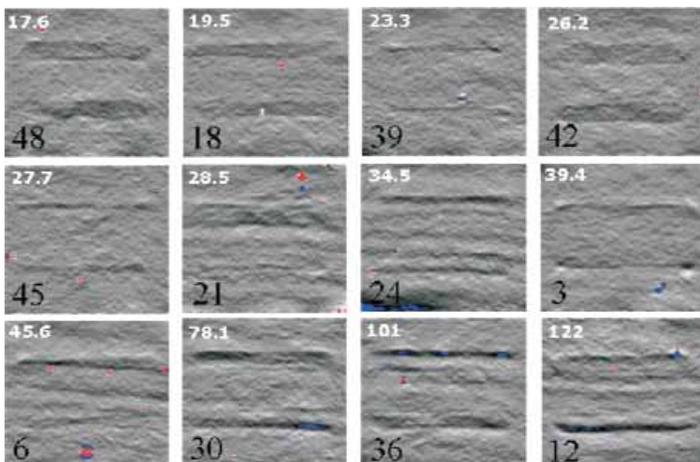


Figure 5: BLRT Images and Scores for the Painted Black Panels Using the Initial Algorithm

Figure 5 illustrates that the "signature" of bond-line read-through varies between panels. For instance, the defects on panels 48, 18, and 42 are "wide and diffuse", whereas the defects on the other panels are "narrow and distinct".

The BLRT scores for the painted black panels are shown in comparison to the expert jury ranking order in Figure 6. The BLRT score are shown in red above the panel IDs. The panel ranking assigned by the "expert" jury, as described earlier, is shown below the panel ID in this figure for reference.

Figure 6 illustrates that the filtering scheme described earlier does not work equally well for all types of bond-line read-through defects. The current version of the post-processing filter and algorithm generate values that meet the "rules" established by the expert jury for an "acceptable" panel order only for the panels with narrow, distinct defects. This filter and algorithm combination appears to underweight wide, diffuse defects, such as those on panels 48, 18, and 42.

BLRT Score	17.6	19.5	23.3	26.2	27.7	28.5	34.5	39.4	45.6	78.1	101	122
Panel ID#	48	18	39	42	45	21	24	3	6	30	36	12
Visual Rank	4	1	1	4	1	6	7	X	9	10	12	12

Figure 6: BLRT Scores for the Painted Black Panels Using the Initial Algorithm

Fortunately, assemblies bonded using robotically dispensed adhesive have, to date, been found to exhibit exclusively narrow, distinct types of defects. Consequently, the current post-processing procedure can be used successfully to determine the relative severity of defects in the ACCJWG's experimental work. Nevertheless, additional filtering schemes are being investigated in hope of identifying a "universal" post processing procedure.

Summary

A metric for quantifying the severity of BLRT defects was developed based on the ONDULO technology. The metric correlated well with visual assessment of the panels provided that the defects on the panels had a consistent "signature". The "best" metric identified to date was calculated by multiplying the square of the defect's mean curvature amplitude by its size. Panel total scores are calculated as the sum of the scores of the individual defects. Further refinement of the algorithm is ongoing to identify a "universal" algorithm capable of properly assessing all types of defects.

Based on the results shown here for narrow, discrete defects, the tool is capable of quantifying the severity of that type defect in a way that correlates to visual assessments. Fortunately, this is the type of defect that has been found in panels made with robotically dispensed adhesive. Consequently, the metric has provided the team with the objective data necessary to experimentally investigate the process and material variables that cause BLRT defects. Furthermore, since the metric is based on measured physical characteristics of defects it eliminates the subjectivity inherent in current assessment techniques.

Acknowledgements

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The Direction of SPE

Statement from Susan Oderwald,
SPE's Executive Director



Introduction

SPE has experienced a dramatic transformation in the past few years that continues as the competitive environment for professional societies also change. This transformation is most evident in four areas.

- (1) the expanded use of partnerships and outsourcing;
- (2) continual introduction of new and improved member benefits;
- (3) continued investment in online technologies; and
- (4) anticipation and reaction to the demands of serving a globalized industry.

Expanding Use of Partnerships and Outsourcing

SPE is a small, \$6 million business operating on a global scale. It has neither deep pockets nor unlimited expertise. In the past, professional societies focused staff and operations on activities such as publishing, events, and board management, while depending solely on volunteer resources for technical content. To a large degree, professional societies competed with each other and not with major for-profit corporations.

Today's reality is different.

Today, SPE competes far more with global publishing houses and other online information providers, many of which have superior resources and global infrastructures. This is especially true in publishing and large-event management activities like ANTEC.

SPE has had to dramatically change how it does business. The use of partnership and outsourcing (sometimes both at the same time) has become a key element of almost every activity within the Society.

ANTEC is a good example. As you know, last year and this year, SPE has partnered with Plastics News to co-locate PlasticsEncounter@ANTEC. In 2009, SPE will partner with the Society of the Plastics Industry, SPI, to produce ANTEC as part of NPE 2009. These partnerships have certainly produced positive and more consistent financial results for the Society, but the driving force behind them is to provide greater participation in SPE by a broader technical audience.

SPE's journals are an excellent example of how a strategic partnership is superior to our previous stand-alone way of doing business. SPE's journals have been co-published with Wiley InterScience for roughly the past 5 years. Under that arrangement, the profitability of the journals has increased by more than 300%. But more important, readership, online availability, and the citing of SPE's journals by other scholars have all seen substantial increases as well. SPE's journals are better positioned in the academic community, and more prestigious as a result of our working with a \$4 billion global publisher.

Starting in 2008, a similar arrangement for SPE's magazine, Plastics Engineering, has begun with Wiley. Co-producing ANTEC, co-publishing our technical volumes: these are just two of the ways SPE has begun expanding partnerships. There are more. In fact, it has become the exception, instead of the rule, that SPE directly produces any major member benefit or activity without the use of partnering or strategic outsourcing.

As a result, over the past six years, SPE's staff has seen a radical transformation in size, job descriptions, and basic activities. In-house staff size has contracted by almost half (from 42 employees in 2001 to roughly 25 by the end of 2008), but the number of partnerships and outsourcing relationships has increased by a factor of 5. This has been driven more by a need for better expertise and global infrastructure than by any specific financial reason, although the outcomes have been equally as important in stabilizing SPE's financial situation.

New Member Benefits

In addition to drastic changes in the way SPE conducts business, we have had to do more for our members and in very different ways than we did just five years ago. The SPE website has become the central medium through which members derive value from SPE. SPE's online technical library, online access to SPE's technical journals, and SPE's online member directory are the most valued benefits, according to SPE surveys. Conferencing and seminars are also highly rated, but have been eclipsed by online benefits. In addition, almost all benefits that members identify as most valued are also highly technical. Networking and other important value propositions that SPE has traditionally provided are still relevant, but only in the context of delivering technical information.

In 2008-2009, SPE will be adding more technical benefits and content online. One key example is that for the first time, SPE's entire library of journal articles from Polymer Engineering & Science and Polymer Composites, some of which go back almost 50 years, will be available to SPE members for free from Wiley InterScience. This comprehensive archive of technical literature will round out SPE's online technical library of ANTEC papers since 1998, providing members with one of the most comprehensive resources for plastics research available in the world. ALL of this is included with their membership fees.

Web 2.0 and Beyond

SPE is only scratching the surface with today's website. Over the next few years, SPE will be adding a variety of online collaboration and publishing tools through which members can meet, confer and collaborate with one another online. Scientists and engineers around the world are experimenting with how these technologies can best serve the scientific community and the public, and standard protocols for how preliminary scientific findings are posted, shared and consumed on the web are very much in a developmental phase. SPE is monitoring these trends closely, and will likely be offering, in the near future, some beta opportunities for members to collaborate online within the confines of the SPE community. Use of blogs, podcasts and other methods of delivering and discussing technical information is also being initially offered and evaluated.

What sets SPE apart from other online suppliers of technical content for plastics is that SPE wants to ensure that its online tools and protocols are consistent with our core values as a professional Society. These state that our activities:

Embrace the principles of sound science, which includes open publishing and review of scientific advancements and results. And, Respect intellectual property and uphold practices that protect individuals and companies from commercial infringement or constraint.

SPE is investing over \$300,000 over the 2008-2010 period specifically to bring our website, database and other information technology infrastructures to a new level of service for our membership.

Impact of a Globalized Industry on the Society

A globalized industry means that technical innovations, research & development and technical expertise will continue to see broader and broader distribution around the world. China, India and the Middle East will provide especially fertile ground for technical innovations in plastics materials, processing and markets. Robust traditional membership models for SPE may or may not be possible in many of these locations. Price, language and cultural barriers to group participation all have an impact on the way SPE operates around the globe.

What is essential for the industry, however, is that the technologies and innovations that are developed locally are vetted and applied globally. In fact, fewer and fewer technologies are derived locally, as engineers and scientists increasingly collaborate on a global scale. SPE has a central role in facilitating that process and in publishing and vetting scientific results.

Regardless of where or by what company technical innovations are initiated, the process of transparent scientific review is essential to protecting both the company and the general public from faulty claims, unsound practices and other unproductive advancements that potentially could create harm and damage the reputation of our industry.

To that end, as new localities for scientific R&D develop around the world, SPE must ensure that such research and innovation are held to the consistent standards of publishing and review. Additionally, if SPE is to remain the preferred medium through which technical information is communicated, SPE will need to conduct more and more activities in those areas where new technical activity is happening - regardless of membership numbers.

To that end, in addition to the U.S. and Europe, SPE has identified China, India, the Gulf States and Brazil as having particular interest, and SPE is actively seeking to produce more conferencing and attract journal publishing from these areas.

The State of SPE's Mission and Relevancy

In this global setting, scientific and technical exchange has become paramount in adding value to companies, and wealth to economies. The truth is that the plastics industry will contribute in a big way to solving some of the world's biggest problems. Technological innovations in plastics will be central to providing access to clean water, improving agriculture production, reducing waste and greenhouse gas emissions, saving energy and improving the quality and longevity of human life.

Such innovation and technological improvements don't happen without a strong, well-funded and motivated scientific and technical community, collaborating globally.

But any technical advances will suffer a diminished potential if the plastics industry - especially our scientific reputation - loses public credibility and trust.

SPE plays a central role in reviewing, publishing and distributing scientific and engineering innovations throughout the global plastics industry. Without more fervent support from companies and individuals for such activities, the industry runs the risk of losing public credibility. Activities such as ANTEC help maintain and improve our credibility by creating a more transparent opportunity for the vetting and distribution of new technologies within a system that works to protect the ownership of such advances.

In addition, demographic trends are creating a global demand for technical talent, upon which this industry depends. SPE actively promotes and supports technical personnel in ways that can attract and retain them within our industry. Furthermore, SPE provides companies with another way to involve and keep their best personnel active and engaged with their global colleagues. This is no longer a luxury or perk, but rather a fundamental necessity in creating a knowledge-based work environment.

In my view, SPE's role and mission have never been more relevant or needed by our industry. However, in the very competitive environment in which companies find themselves day-to-day, the longer-term nurturing of talent and technology often falls to the side. This is shortsighted and detrimental to the development of any company's competitive advantage. SPE needs to do more to reach out to companies and explain the importance of our mission to their competitiveness as companies and as an industry.

While the industry will continue to evolve and face challenges, SPE is excited to evolve with it, providing the necessary tools and events that help companies succeed. This is where you come in. While it is our challenge to reinforce our relevance to companies in the industry, I challenge you to come right along beside us and help us in this mission. You can have an impact, and I look forward to continuing our combined goal of being the premier source of technical information in this ever-changing global industry.



Visit the SPE International Website for up-to-date information on training, seminars, and other career enhancing information.

www.4spe.org

Membership Matters

Below we welcome some of our newest members of the SPE Automotive Division:

Abdul-Wasin Ben Abdul-Wahab	Ken Gassman	Inteva Products	Paul Osentoski
Roy Ash L&L Products	Tohru Haruna	Ashai Denka Co	Nicholas Petruzzi Sr. Mold-Masters
Boaz Axelrad	Robert Hooker		Spyro Petsalis Univation Technologies
James Balzer Daikin America Inc.	William Howard	Milwaukee Wire Products	David Plocinski Tri-Par Die & Mold Corp
Mathew Barr	Derry Jing	Dow Chemical (China) Co. Ltd	Stephen Purvines Kurz-Kasch, Inc.
Krystil Barrett Azdel Inc	Ali Kerr	Shepherd Chemical	John Putnam Baxter Healthcare
Chad Bentley Vivator	Kenneth King		Andrew Rich Nanocyl North America
Romylos Bethanis Eldorado Industrias Plasticas	Chris Kohler		Djaris Richardson Richco Inc
Mark Bissell	Taylor Krugh		Drago Santrach Drago Santrach Consulting
Hermann Boecker	Kyungmin Lee	University of Toronto	Tony Schoendorff Chem-Trend LP
Dirk Bonefeld University of Paderborn	Christopher Lee	Quantum Leap Packaging	
Anthony Botting	Ann Lesko	TAC Transportation	
Charles Buehler	Matthew Letizio		Donald Smith Oakwood Group
Jim Callough LRM Industries, LLC	Justin Lumbley		Toby Spanos O'Sullivan Films
Steven Carter Accel Color Corporation	James Madden	Ingenia Polymers	Rick Spring Clariant Corporation
Lou Carulli Konica Minolta Sensing Americas	Ismail Menguc	WYKO Tire Technology	
Robert Chimelak	George Moore	Delphi Retiree	Christian Taylor Ampacet
Bob Compton Factor Inc	John Morel		Scott Turner L&L Products
John D'Amico Sr. Map of Easton, Inc	Jean-Francois Morizur SABIC-IP		Daniel Urban Univ. of Wisconsin-Madison
Garrett Daum	Robert Nadin	Sunoco Chemicals	Devin Warren Danaher
John Davis Rubbermaid	Nate Newth	Uni. of Michigan - Dearborn	David Weisinger ExxonMobil Chemical Co.
Fadi El-khatib Ph.D. BASF	Nam Nguyen	LyondellBasell Industries Inc	Vaughn White
Jerry Eng Cytec Industries Inc	Adolfo Ortiz	Stoneridge	David Whiting
Cari Fink Honda R&D Americas Inc	Tom Ortmanns	Ortmanns GmbH	Kelly Williams Molded Geometries Inc
Mary Finkel	Todd Osborn	PolyOne Corp.	William Windscheif
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Councilor's Report

Nippani Rao

The following summarizes the council meeting held in Milwaukee, May 3-4, 2008.

1. Council as a whole (Pre-Council Meeting to discuss general topics of interest), chaired by Brent Strong.

◆ SPI President Bill Carteaux made a presentation of the upcoming ANTEC@NPE2009. Final negotiations are near conclusion, with no major outstanding issues. The joint ANTEC and NPE is a win-win for both SPE and SPI and is scheduled for June 22-26, 2009 in Chicago, IL.

◆ Tricia McKnight reviewed the leadership resources that are available to all the members on the SPE website www.4spe.org. It is recommended that all SPE members review the material, which includes leadership news, membership directories, tech library, SPE store, polymer magazines, award programs, technical papers, and conference planning guide. Tricia also reviewed that all boards should provide headquarters with a roster, meeting minutes, newsletters, IRS filings and annual plans.

2. Council 1, Chaired by outgoing President Vicki Flaris.

◆ Membership continues to be a primary concern. Currently at 18,666.

◆ SPE website is being re-designed. Will improve online technologies and member benefits.

◆ Global growth is key for future of SPE. Turkey is granted a new Section. Greece and the Gulf countries are in the process of formation, and 3 new SIGs (special-interest groups) are also being formed.

◆ Partnering with Plastics Encounter at ANTEC is working well for both groups.

◆ Ken Braney, treasurer, reported a modest deficit at this point. However, it is \$40K better than last year in income, and expenses are down by \$60K. ANTEC registration is on target for 3000 people. Plastic Engineer Magazine (PE) advertising is up. PE will be published by Wiley publications, which should help to improve PE bottom line.

◆ Gail Bristol reported the SPE foundation awarded \$120K in scholarships to 32 students in 2007. Will exceed that amount in 2008. The foundation ended 2007 with a surplus of \$100K. Current investment fund is over \$1.5 million. The foundation will be folded into SPE by end of the year.

3. Council 11, Chaired by incoming President Bill O'Connel

◆ Bill O'Connel introduced his new management team. Jim Griffing, EC secretary, Barbara Arnold Feret, treasurer, New EC VPs, Austin Reid, Scott Owens and Brian Grady. Dale Grove, Divisions committee chair

◆ Bill reviewed the global activities and their importance to future growth of SPE. The activities are: 2007 Dec. India Automotive show, Chinaplas hollow parts conference, and upcoming Eurotech in Barcelona, Sept 2009. The new motto is "Make it happen". SPE is spending 300K to improve the website for better membership benefits including 3Q 'Plastipedia"

◆ Margie Weiner presented the Plastivan program. The Automotive Division and Detroit Section are very active in this program. Contact Betty Coleman to schedule. 781-337-7127

Both the Automotive Division and Detroit Section received Pinnacle awards. Ron Price received the Honored Service member award. Nippani Rao received a gold SPE pin for being the chair for the Divisions Committee for 2007-2008.



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