SOCIETY OF PLASTICS ENGINEERS
BLOW MOLDING DIVISION

Summer 2005 Issue

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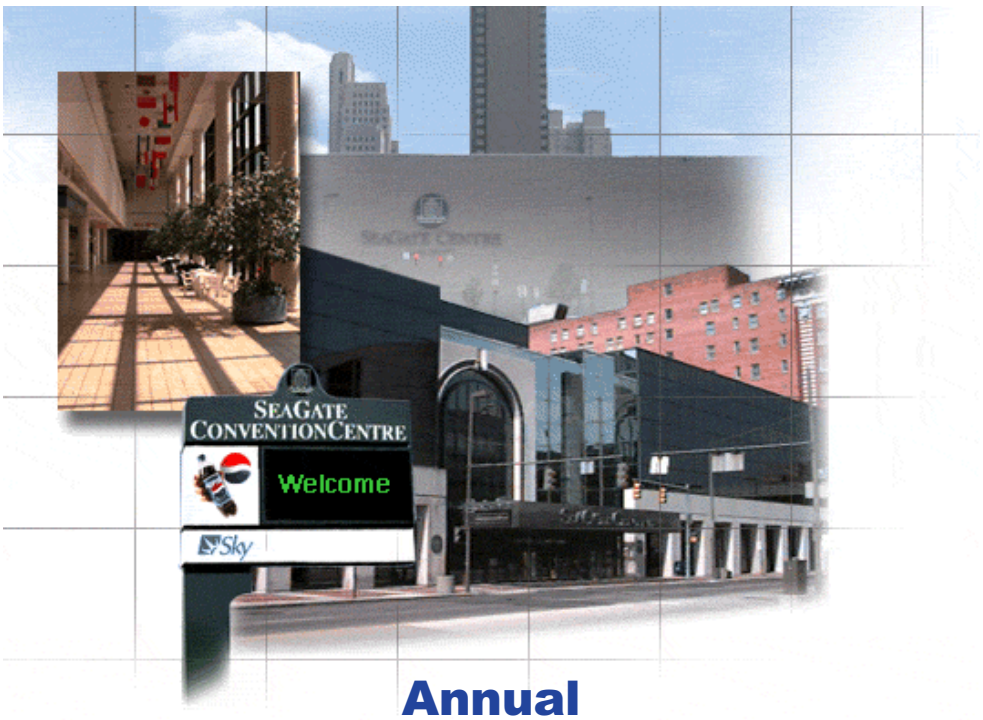


Annual Blow Molding Conference

October 12-13, 2005
Toledo, Ohio

Coming soon, the Blow Molding Division of SPE will be hosting the premier forum for the blow molding industry.

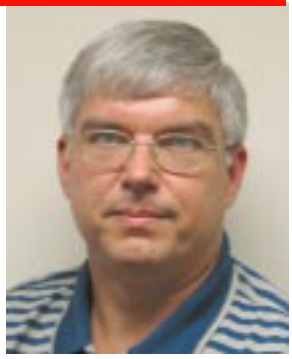
The Annual Blow Molding Conference provides blow molders, resin manufacturers, mold-makers, and machinery manufacturers the opportunity to network and interact while learning about the latest innovations in blow molding technology.

Speakers from 25 companies will cover topics from every area of the blow molding industry.

Look for more details and registration information in this issue.

Chairperson's Message

Ron Puvak



From our front page to our back page you can see we are truly focused on our Annual Blow Molding Conference 2005. This year's event is unique in many ways and the volunteers putting it together have truly organized a worthwhile program.

We have combined both major segments of the blow molding industry (packaging and industrial) into one conference. To better utilize everyone's time, we gave each segment a unique path so that attendees will be able to gain insight into just those areas of interest. This will afford everyone attending something of interest pertaining to his or her own personal needs.

Many of you have attended our Annual Blow Molding Conferences in the past and each year we have seen considerable growth. This annual conference event is becoming one of the last vestiges of open technical interaction. It is open to anyone interested in Blow Molding technology advances.

In case we haven't told you all the details about this conference, it will be held in Toledo, Ohio, on October 12-13, 2005. We will offer a dual path program which will present information on both Packaging and Industrial applications. You will be able to find more information on our web site and in this newsletter.

So, if you have not yet made plans to attend, do so now! Learning is a lifelong effort and you do not want to miss this opportunity to learn about what's new, innovated and practical. Who knows, it may help you get that promotion you deserve. A little education never hurts.

I look forward to meeting you all in October.

From the Editor

Robert DeLong

Welcome to the inaugural issue of our electronic newsletter! Consider this a work in progress, as we iron out the kinks. About 60% of the SPE Divisions and Sections have gone electronic, one of the benefits being to save snail-mail postage and print costs for spending on education and other programs, such as scholarships.

Please make sure your E-mail address on file at SPE is correct, or you will not be reading this!!

Student Design Competition

The Blow Molding Division of the Society of Plastics Engineers has awarded its 2005 Student Design Competition to Atanas Gagov and Pankaj Rathi. The title of their winning submission was "Exhaust System by 3D Blow Molding Process". Atanas and Pankaj are both enrolled in the Polymer Engineering graduate program at the University of Akron. They will be awarded $1,000 and offered an opportunity to present their work at an upcoming conference. The Student Design Competition has been sponsored by the Blow Molding Division since 2000. The 2005 winning entry will be posted at the Blow Molding Division website (www.blowmoldinddivision.org) alongside prior year's submissions.

2005 Memorial Scholarship

The Blow Molding Division of the Society of Plastics Engineers awarded its Memorial Scholarship at the 2005 ANTEC in Boston. The Blow Molding Division's scholarship program seeks to reward outstanding candidate students currently enrolled in degreed undergraduate plastics engineering programs. The Division is particularly interested in identifying students that plan to pursue careers in the blow molding industry.

The Carrie Fox Solin Memorial Scholarship was awarded to Matthew Loeffler. Matt will begin his junior year at Penn State Behrend (Erie, PA) this fall. He has a 3.53 GPA, and participates in several extracurricular activities. Matt is a native of Carnegie, PA.

These memorial scholarships are supported by the Blow Molding Division and its Corporate Sponsors. A current list of the Division's Corporate Sponsors can be found at the Blow Molding Division website: www.blowmoldingdivision.org

The Quest for the Holy Grail of Color Concentrates:

The Universal Carrier

Dr. Darrell Kirchner, Teknor Color Company

Alchemists of old sought a touchstone, a catalyst thought to be necessary to change base metals into gold. Juan Ponce de Leon was convinced that a "fountain of youth" was hidden somewhere in Florida. In the plastics coloring industry, processors seek a concentrate made with a "universal carrier"—one that can be successfully blended into a variety of plastics without causing brittleness or delamination. Such materials have been touted over the years and, who knows, some may work. I believe, however, that regardless of whether the carrier meets its stated goal, a true universal concentrate will remain ever elusive.

A universal color concentrate makes economic sense. If a processor is incorporating different plastics into components that will be assembled into a single consumer item, wouldn't it be good to be able to purchase a single color concentrate for all the various component plastics without worry of delamination or brittleness? There is an assumption built into the thinking process, though. The assumption is that the same color formulation (a single universal concentrate) will produce identical color in two dissimilar plastics.

Professional color matchers know better! That simple and self-evident postulate is absolutely not true! Put the same pigment blend into different plastics and those plastics will be different colors. The plastics don't even have to be dissimilar. Apparent color can (and often does) shift when a different supplier's plastic is substituted. Worse yet, there are cases where different lots of the same supplier's plastic cause a color shift.

Does it matter? If the two plastics will never be seen side by side, the answer is probably that it doesn't matter if the parts don't match. In those cases, the use of a universal concentrate is fine. On the other hand, a multicomponent unit with parts in intimate contact requires the closest color tolerance there is. By far, the majority of universal concentrate requests that have come through my office have been of the latter type.

Why does this happen? Why does color depend on the type of plastic, the manufacturer of the plastic, and, sometimes, even the particular manufacturing lot of the same plastic? Let's look at some of the reasons for this unwanted color shift.

1) Color contribution of the plastic. All plastics are not created equal. Some are transparent and are crystal clear. Some are a milky white. Some are very opaque white. Others are "yellowish" in color, while others are downright amber. In each case, the color contribution of the plastic visually blends with colorants to produce a unique final color. A color formulation will have to be modified for one of the plastics so that it will match the other plastic. If the need arises for two different concentrates, regardless of the reason, doesn't it make sense to make each one in the carrier most compatible with that plastic?

2) Processing temperatures of the final part. To prevent degradation, colorants must be held below a maximum temperature unique to the individual colorant. Colorant degradation translates to color shift. Plastics that process at low temperatures are more forgiving in this regard than are the more exotic engineering resins, which, in certain cases, must be processed above 600°F. If a universal concentrate were to be considered for plastics, which require vastly different processing temperatures, then only colorants that can withstand the higher temperature should be used. This severely narrows the choice of colorants in the first place, and it usually means adding cost to coloring the lower melting plastics. Additional cost wipes out most of the reason for considering the universal carrier in the first place.

3) By-products of the manufacturing process. Most plastics are produced by using some kind of metallic catalyst. A small amount of that catalyst will always remain in the final product. Colorants produce color because of the way they are put together at the molecular level. On the molecular level, colorants consist of a skeleton of atoms enveloped by a cloud of electrons. It is that electron cloud that determines which wavelengths of light are reflected and which are absorbed. That is just a fancy way of saying that the electron cloud determines the ultimate color a pigment produces. If that cloud is altered in some way, the perceived color shifts. Catalyst residue can be attracted to the electron cloud. When that happens, the cloud is perturbed and the color shifts. Plastics that are otherwise identical will appear to be different when the catalyst residues are different.

4) The chemistry of the plastic. Just as the catalyst can perturb the electron cloud of the colorant, so can the chemistry of the plastic itself. Polyolefin plastics, such as polyethylene and polypropylene, consist of carbon and hydrogen attached to one another by what is referred to as "single bonds." Single bonds won't interact with a colorant's electron cloud. Engineering plastics are another matter because they possess electron structures that can interact with colorants on the molecular level. Such interactions produce color shifts. When changing plastic types, there is often an unexplained shift in the final color, which can be traced to the chemistry of the plastic.

Summary.

The desirability for a universal carrier diminishes when color anomalies crop up. Unfortunately, when color agreement is important (usually the goal for universal concentrates), color adjustments are usually required. Since there must be two formulations anyway, doesn't it make sense that each one uses the carrier that is optimal for its intended plastic, rather than using a compromise carrier, which may prove more expensive?

Looking at the Sunny Side

Reprinted from Thinking Faster weblog
(http://workingsmarter.typepad.com)

I was reading an article in The Economist - in my "humble" opinion probably the only magazine you really need to read - and came across an article therein on project management. Now, I usually think project management is a fairly dry subject, but in this case the article was really about the fact that most projects end up costing more than anticipated and taking longer than anticipated - and much of that overage is due to poor estimation.

This really resonated with me because I think most project managers and the rest of us too are overly optimistic when we estimate how long a project will take to complete and how much it will cost. Going into any project, it's fairly simple to outline the basic parameters of the project - what should be accomplished, the rough number of resources required, the major milestones and so forth. Where I think things break down is in the little details.

For example, I worked with a firm that developed software in Israel. The developers and project managers in Israel were very hard working and dedicated, and did a great job. However, I received a project plan from a product manager for a project that was started in July and intended to finish in October. For those of you who don't know (and I didn't at the time), almost every significant holiday on the calendar is in August and September in Israel. The project manager did not take into account the fact that during the period July - October the team would miss a total of 2 weeks of work time due to vacations. And I would have accepted the project plan except for the fact that one of the developers told me he was going on a holiday - and then explained that everyone else would be as well.

We often don't factor into our plans real time sinks like:

- Holidays
- Vacations
- Illness in the team
- Sudden emergencies which call team members back to their original jobs
- A lack of timely decision making
- Requirements that are not well defined and still in motion during the project
- Changing attitudes about the project and the financial commitments

What this means is that in planning a project we are too fixated on the "sunny side" or "sunny day" forecast - nothing will go wrong and all decisions will fall into place in a timely fashion. In software terms, we call this the "golden path". That's the demonstration that the software guys give you in the new software version where they don't dare deviate from the one business process in the software they know that works. Any other button push or deviation from the golden path may cause a crash.

To be productive, we have to consider the good and the not so good. Overly optimistic project planning simply leads to rework and disgruntled teams. As much as possible, define the project and especially the scope of the project and your expectations about the project as clearly and definitively as possible to the project team and the folks who will have to supply you with information or resources. Anytime more than 3 people are on a project, someone is going to get sick, have a sick relative, have a relative or friend pass away, have an accident in their car or something else that will pull them away from work. Even consulting firms, firms that make money by scheduling and selling their folks into projects, rarely anticipate more than 80-85% effectiveness from an individual. What effectiveness do you expect per person on your project?

Also, define the expectations clearly. Tell the decision makers and resource providers that the project requires decisions to be made in a timely (ie within 2 days) basis. Delaying decisions means slowing down the team. In one fixed fee project where this was going to be a problem, we wrote into the contract the right for the project team to make any decision that the management team could not or would not make in 3 days. Replacing people on the team or changing the requirements is also a real momentum killer. Let's face it - it takes a team a certain amount of time to get "up to speed" to become effective. If the requirements are constantly changing, or the team members keep changing, that team never reaches its full potential.

Good estimation is the key to timely projects. Overly optimistic assumptions which don't factor in real world issues (sickness, vacation, changing priorities, etc) will lead to inaccurate projections and greater issues down the road. Keep your outlook optimistic, but be sure you consider the things that "can" happen during a project, because they will happen.

Graham Machinery Group
Continuing Education Grant Program

The Blow Molding Division of the Society of Plastics Engineers and Graham Machinery Group co-sponsor a program for continuing education of blow molding industry workers. By making financial resources available to Blow Molding Division member companies, this program will assist more people in obtaining continued education in blow molding and improve their job-related skills.

Up to $500 per person is available to attend an SPE Blow Molding Conference, an SPE Seminar in Blow Molding, or other program applicable to blow molding.

Eligibility Criteria:

1. The employee must be a full-time employee of one of our member companies (having at least one current member of the SPE Blow Molding Division).
2. The employee's job function must be blow molding related.
3. The employee's academic training must not be higher than Associate Degree.
4. The employee must have company recommendation and support.
5. Costs exceeding $500 will be the responsibility of the employee or employer.

How to enroll:

1. Submit a request to the Blow Molding Division at the following address:

   Mark Heitker
   Innovene Tech Center
   1230 Battleground Road
   LaPorte, TX 77571
   Mark.Heitker@innovene.com

2. Include a letter of support from your company.
3. You will be notified of acceptance before the event that you wish to attend.

Councilor's Report May 2005

Robert DeLong

ANTEC

ANTEC is the society's largest venture in terms of financial "risk", and the Chicago ANTEC last year lost money (the first ever), primarily due to unfilled contractual room guarantees. Preliminary registrations and room reservations here in Boston are coming in at a satisfactory rate, and we should satisfy the hotel contracts, negotiated several years ago in far different economic times. The world has changed, especially after 9/11, and technical meeting costs are scrutinized and evaluated by attendees and their sponsors. Total attendance is inching toward 2,800. All Society loans are paid off, and this ANTEC should be profitable.

Membership

The Society's membership has been growing, albeit slowly, with 8 straight months of increases, and now totals in excess of 20,000. We are a truly international society, with over 1500 in Europe. Within our Blowmolding Division, we welcomed 40 new members, for a total of 627 primary and 367 secondary members.

Rebates

Section and Division rebates will be restored in 2006, using the same formula as existed prior to their suspension for financial reasons. To aid the society's cash flow, they will be distributed quarterly, not in a lump sum. Rebates will become a budgeted item, and thus payable in the current fiscal year, with greater flexibility in balancing the budget. Tying the rebate to member value is under proposal, to insure Section/divisions are serving their members (like this newsletter, for example). Further details will be forthcoming. Currently, there has to be a Board of Directors in place, plus have submitted financial statements to receive the rebate-these minimalistic requirements will be expanded, just exactly how is under discussion.

Technology Advisory Board

In the rapidly changing world of plastics, keeping abreast of the latest technology is important to keeping the society current. Two SIG's (Special Interest Groups) have been added, radiation processing of polymers, and nanocomposites.

E-learning/self-directed learning

While over 500 registered for the free tutorials at ANTEC, overall Seminar registration was down considerably, with the blowmolding seminar cancelled due to few registrations. Web-based seminars are growing in popularity, and virtual meetings are commonplace. The Society recognizes this trend, and will respond accordingly. Been on 4SPE.org web-site lately? Check out the variety of material available! We are getting 10 million hits a month!

Honored Service Award

Considerable controversy in Council over the criterion for the Honored Service award. Consequently, the whole process is under review, with one proposal to use different criteria for Section, Division, and International sectors. I will keep you posted on this.

MiniTechs

MiniTechs are regional seminars sponsored by a Section (or possibly, a Division) lasting one day or less. Since they don't need a scheduling review by the Society for conflicts with other seminars or programs, Headquarters is often blind-sided when a caller asks for details. Other aspects, such as how to harvest attendees names as prospects for membership, etc. has us pondering possible solutions.

AMA

The Society has struck a deal with the American Management Association whereby members can get AMA member pricing when attending any of their seminars or training courses.

In Memoriam

Frank W. Steere Jr.

Frank W. Steere Jr. passed peacefully away on Tuesday, May 24, in Naples, Fla. after a truly wonderful life.

He was born August 29, 1916 in Detroit, Mich., the son of Jessie Hunter Steere and Frank Walter Steere Sr. He spent his boyhood years in Scarsdale, N.Y., where he earned the prestigious Eagle Scout Award.

Frank graduated from the University of Michigan with a degree in chemical engineering in 1938. The next several years he conducted agricultural experiments on the family farm and then moved to Akron in 1941. He took a job with BF Goodrich Chemical Company where he eventually began working in the emerging vinyl plastisol business. Intrigued with the possibilities of this revolutionary new material, he quit his job and established a fledging molding business in the basement of his home on Greenwood Ave. The Quikoin coin purse was one of his first successes and he sold over 50 million during the 1950s. Today, Steere Enterprises Inc. is a thriving plastics manufacturing company serving automotive and a diverse list of other industries.

Despite the demands of being an entrepreneur as well as raising a family, Frank's philosophy of life has always been service above self. He was passionate about giving back to his community and making the world a better place in which to live. The list of community organizations he served, virtually all in a leadership role, is truly impressive. He served as president of the Akron General Medical Center, Akron Summit County Library, Stan Hywet Hall and Gardens, The University of Akron Hilltoppers, and United Community Council of Summit County (predecessor to the United Way).

As president of the Library Board he served for over 30 years, it was his vision that lead to the construction of the library downtown in the mid 60s. He always felt that a city's library should be on the main street in town. He was co-founder of Junior Achievement of Akron and served as co-chairman of Akron's Sesquicentennial Celebration in 1976. He also served as Director of BancOhio National Bank, Ruhlin Construction Company, Karg Corporation, and Akron Community Trust. Frank founded the Akron Council on World Affairs. Along with his wonderful wife Ruthie, he also founded the Naples, Florida Council on World Affairs which today has over 1500 members. He started ALTWAR (alternatives to war) at Trinity Lutheran Church in 1968. In 1970 ALTWAR was adopted as a citywide project by the Council of Churches, and in 1971 Congressman John Seiberling introduced ALTWAR's resolution to search for alternatives to war to the House of Representatives. He also served as President of the Congregation at Trinity Lutheran Church and was a church councilman for over 13 years. In recognition of his devotion to community and his fellow man, Frank was awarded the distinguished Bert A. Polsky Humanitarian Award in 1981.

He is survived by his loving and devoted wife of 61 years, the former Ruth Elaine Dugan of Akron, his two children and spouses F. William Steere (Mignon) and Elaine (Robert) Johnson; grandchildren, Brock William Steere, Brian Jeffery Steere, Kimberly Willey Freeman, and Lida Willey Orr; and great-grandchildren Benjamin Willis Freeman, Hanna Elizabeth Freeman, Lida Picton Orr, Arthur Stratton Orr, Lucy Willey Orr, and Willis Howard Orr.

Memorials may be made to Akron Community Foundation, Akron General Development Foundation, or Stan Hywet Hall and Gardens.

Published in the Akron Beacon Journal from 5/29/05 - 5/30/05

Inventor Peter Schurman dies at 77

By Bill Bregar

NEW CANAAN, CONN. (April 21, 2:20 p.m. EDT) —

Peter T. Schurman, who invented the double-wall carrying case and founded blow molder Plastic Forming Co. Inc., died April 13 after a brief illness. He was 77.

Schurman held more than 50 patents in plastics machinery and packaging.

A graduate of Exeter Academy and Cornell University, he began his plastics career in 1954 in Rochester, N,Y., as a resin salesman for Union Carbide Corp. In 1960, he started Airmold Plastics in Buffalo, N.Y., where he invented the process for blow molding double-wall carrying cases and toolboxes. He sold Airmold to W.R. Grace & Co. in 1965.

The following year, Schurman founded Plastic Forming Co. in Woodbridge, Conn. PFC began as a machinery developer and custom blow molder, then in 1969, the company entered the market for double-wall carrying cases using a new process he developed.

The market grew quickly in the 1970s as the cases were used to package power tools, chain saws and a range of consumer and industrial products.

PFC opened other companies, then spun off and licensed them, to make double-wall cases, including Custom-Pak in Clinton, Iowa; Southern Case in Raleigh, N.C.; and Western Case in Tustin, Calif. The company licensed existing molders in the United States, Canada, France, Spain and Taiwan.

Schurman sold PFC and retired in 1998. He continued to work as a consultant, focusing on patents for new products.

PFC runs plants in Massillon, Ohio, and Woodbridge.

Annual Blow Molding Conference

October 12-13, 2005
Toledo, Ohio

The premier forum for the blow molding industry!

The Blow Molding Division of the Society of Plastic Engineers is ready to provide you with the latest innovations in blow molding technology!

This conference provides blow molders, resin manufacturers, mold makers, and machinery manufacturers an opportunity to network and interact on various topics.

Program Highlights

- ✔ Global blow molding issues
- ✔ Rigid packaging and technical parts
- ✔ Automotive and Industrial blow molding
- ✔ Fundamental forums by industry experts
- ✔ Plant tours to:
  - Dana Technical Center
  - Phoenix Technologies PET Recycling
  - R&B Machinery

Topics

Topics for every area of the blow molding industry will be discussed, including:

- ✔ Market needs
- ✔ Industry direction
- ✔ Trends in machine design
- ✔ Extrusion blow molding
- ✔ Barriers and coatings
- ✔ New products
- ✔ Recycling technology
- ✔ Decoration, printing, labeling
- ✔ Improving productivity and profitability

Special Events

A forum will be held in the afernoon on Tuesday, October 11th which will cover the fundamentals of different basic blow molding technology. Featured discussions will include accumulator head blow molding technology by Bob Jackson; Olefin material properties by Robert Delong; PET stretch blow molding by Scott Steele; and continuous extrusion blow molding by Robert Slawska.

Included in the cost of the conference are breakfast and lunch on each day of the conference as well as dinner on Wednesday, featuring a special guest speaker.

Arrangements are being made for the PlasticsVan to visit the conference on Wednesday.

Speakers

Companies participating with speakers include:

- ✔ CMAI Global
- ✔ Bassel
- ✔ Bekum
- ✔ Cargill Dow
- ✔ CCL Label
- ✔ Glycon
- ✔ Graham Engineering
- ✔ Jackson Equipment Co.
- ✔ MBK
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- ✔ Multicolor
- ✔ Nissei ASB
- ✔ Omya
- ✔ Plastic Technologies, Inc.
- ✔ Proven Technologies, Inc.
- ✔ R&B Engineering
- ✔ Rubbermaid
- ✔ Sidel
- ✔ SIG Beverages NA
- ✔ SPI
- ✔ Stress Engineering
- ✔ Univ. of Toledo Polymer Institute
- ✔ Vertx
- ✔ Visteon
- ✔ Xaloy Corporation

Location

Toledo's Seagate Convention Center

Lodging

Radisson Hotel Toledo
101 North Summit Street
Toledo, Ohio 43604
Tel: 419-241-3000
Email: rhi tole@radisson.com

For More Information

Please contact:
Scott Steele at 419-867-5403

Blow Molding Division
presents the

Annual Blow Molding Conference

October 12-13, 2005
Toledo, Ohio

The premier forum for the blow molding industry!

REGISTRATION FORM

Name _____ Title _____

Company _____

Address _____

City _____ State _____ ZIP _____

Tel _____ Fax _____

Email _____ SPE Member ID No. (if known) _____

Registration Fee: $350.00

Fee includes all materials, lunch and dinner.

Payment Method: Check - made payable to SPE Blow Molding Division, sent with registration to:
ABC Conference 2005, P.O. Box 964, Holland, OH 43528-0964, USA

OR Paypal® (on-line payment service: www.blowmoldingdivision.org and choose conference link on left to register/buy)

Register Now!

You don't want to forget.

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