



# **Society of Plastics Engineers**

**BLOW MOLDING DIVISION**

Vol 2015 Edition 2

## **2015 PLASTICS HALL OF FAME INDUCTEE**



### **ROBERT DELONG**

Vice President, Blasformen Consulting

Robert Delong's experience in the plastics industry spans more than 50 years and many have had the opportunity to benefit from his expertise.

His most recognized contribution is the development of the industry's best-processing milk bottle resin in the 1960's. Mr. Delong was able to achieve the efficiency, high standards, and consistency required for the bottles through a resin blend process compound that complimented the performance of the blow molding machines being used to manufacture the product.

Around the same time, he was the first to recognize the "superflow" melt-facture effect on bottle quality and to develop solutions to the issue.

In addition to other contributions to blow molding resin and machinery, Mr. Delong is a proficient author and lecturer.

Mr. Delong received his bachelor's degree in Chemical Engineering from Clarkson University, and completed graduate studies in Law and Marketing from the University of Toledo, respectively.

Mr. Delong is also the recipient of the Lifetime Achievement Award from SPE's blow molding division, is a Fellow Emeritus of SPE, and has received several other industry honors.



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Division*

## Chairperson's Message



Dear SPE Members, Colleagues and Friends,

Welcome to the Spring/Summer edition of the SPE Blow Molding Division Newsletter.

Our Division was honored to have one of our own, Mr. Bob DeLong, inducted into the 2015 Plastics Hall of Fame. An SPE member for 57 years, Bob's career is still going strong as you'll see in this issue of the newsletter where he has teamed with David Calderone to develop and teach blow molding at Calhoun Community College in Decatur, AL. The course is organized by the Blow Molding Division.

The Blow Molding Division has been hard at work these past few months organizing the Annual Blow Molding Conference (ABC). ABC 2015 will be our 31st consecutive year hosting this premier forum dedicated exclusively to all things blow molding. This year's event will be held October 12th through 14th at the Sheraton Station Square Hotel in Pittsburgh, PA. The ABC continues to grow in size and stature. With both current and timely issues presented as well as a full complement of "Plastics 101" sessions, the ABC is considered a "don't miss" event by blow mold professionals within the industry. My fellow Directors and I extend our personal invitation to all of you to attend, participate and sponsor the ABC 2015. Visit our website and the dedicated ABC 2015 web page at [www.blowmoldingdivision.org](http://www.blowmoldingdivision.org), for current information.

This year's ABC theme is, "Innovating, educating and sustaining the future of Blow Molding" and will once again bring together true industry veterans and experts willing to share their knowledge regarding the most current issues facing recycling and sustainability, improvements and developments in machinery and technology, additive manufacturing and 3D printing, renewable bio-polymers, testing and inspection, liquid color and end user panels focusing on packaging issues and the impact of lightweighting and downgauging in industrial manufacturing and design. Indeed, this year's presenters include a cross-section of the industry including plastics professionals from Milacron, The Dow Chemical Co., APR, Amcor Rigid Plastics, Kraft, Kronos USA and Ford Motor Company to name a few.

In addition to the general and break-out sessions, a full schedule of "Plastic 101s" will be offered by some of the leading industry professionals. This returning "hallmark" of the Annual Blow Molding Conference will offer quick immersions in such topics as resins, screw design, 3-D printing and decorating, EBM and stretch blow molding technology and a number of other topics relevant to the continued successful operations of all blow molding companies. The Third Annual Blow Molded Parts Competition will once again feature entries on such categories as packaging, industrial, consumer and pharmaceutical. Last year, the Competition included a special vote by conference attendees as they named their "People's Choice" award in the packaging and industrial categories. We encourage you to visit the Parts Competition webpage at: <http://www.blowmoldingdivision.org/blow-molded-parts-competition/> for details about submitting an entry and to see last year's category winners.

With only a handful of exhibit spots remaining, I encourage you to contact Deirdre Turner at [dcturner@earthlink.net](mailto:dcturner@earthlink.net) if you are interested in participating in this marquee opportunity to network with others and promote your company's innovations and solutions across so many applications. On behalf of the Board, we extend our sincere thanks to our Division Sponsors whose support sustains and drives the educational objectives of the Blow Molding Division. Our 2015 sponsors can be found at our dedicated webpage here: <http://www.blowmoldingdivision.org/blow-molding-division-sponsors/>

I look forward to continuing to work with my fellow Board members to advance your goals. I hope that you will plan to attend ABC 2015 where you can share in the opportunity to lead, educate, inform and acknowledge all the great things about this unique industry!

**See you in Pittsburgh!**

*Jamie Pace*  
2015 SPE D30 Chair



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## ABC 2015 Blow Molded Parts Competition Entry Form

**Entry Deadline:** October 2, 2015

**Shipment Deadline:** Oct. 11, 2015

As the premier event for the blow molding industry, the Annual Blow Molding Conference showcases the latest advancements and innovations in blow molding design and applications. This year, the SPE Blow Molding Division invites all conference attendees, speakers and sponsors to participate in the **Third Annual Blow Molded Parts Competition**.

### Product Entry Submission Form

Submitter / Attendee\*: \_\_\_\_\_

Submitter Company Information\*: \_\_\_\_\_

Part Name\*: \_\_\_\_\_

Manufacturer / Blow Molder: \_\_\_\_\_

Designer / Other Contributors: \_\_\_\_\_

Mold Maker / Toolmaker: \_\_\_\_\_

Material Supplier / Resin Type: \_\_\_\_\_

Address\*: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone\*: \_\_\_\_\_ Mobile Phone\*: \_\_\_\_\_ Fax\*: \_\_\_\_\_

Email\*: \_\_\_\_\_

Submitter signature and Release of Liability\*: \_\_\_\_\_ Date: \_\_\_\_\_

### Product Category: please check one

Packaging: ☐ Food ☐ Beverage ☐ Pharmaceutical ☐ Packaging Other

Industrial: ☐ Automotive / Transportation ☐ Consumer Goods ☐ Industrial Other

### Shipping Information:

SPE Blow Mold Conference  
PART COMPETITION  
Sheraton Station Square Hotel  
300 West Station Square  
Pittsburgh, PA 15219  
Hotel Contact: Ms. Christine Engel  
Tel: (412) 803-3871

Parts should be shipped no more than 2 business days in advance of event. Shipments will be delivered to the conference registration area outside of the exhibit hall. Each entry should be shipped with a completed return bill of lading form.

### Submission Instructions:

Email the following to [parisonsblowmolding@gmail.com](mailto:parisonsblowmolding@gmail.com)

- Completed and signed entry and release form
- Display and judging information form
- Product image in a jpg format

The image and description should be suitable for publication. A separate entry form, description and photo will be required for each submission.

**Contact:** Lew Ferguson, Chair, Blow Molded Parts Competition  
Email: [parisonsblowmolding@gmail.com](mailto:parisonsblowmolding@gmail.com) Tel: 313-506-4637



ABC 2015



## BLOW MOLDED PARTS COMPETITION

**Part Name:**

Submitter / Company:

**Part Description**

[1 to 3 sentences]



**Part Features / Benefits:**

[include novel features of the part like, design, manufacturing, material application, parts consolidation, commercial implications, sustainability, safety, cost savings – up to 12 bullet points]



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**Photo of the Part:**

► Please send a JPEG picture of the part as a separate file.



## ABC 2015 Blow Molded Parts Competition Guidelines

1. Parts may be entered by any conference attendee, speaker or sponsor (up to two parts per participant)
2. All entries must include a plastic form utilizing the blow molding process in some portion of the product.
3. All submissions must be new to the market starting commercial production within the last two years and made from production tooling.
4. Parts must be able to fit on display table. If you wish to display a part large than 48 inches, please contact Lew Ferguson, parts Competition Chair at [parisonsblowmolding@gmail.com](mailto:parisonsblowmolding@gmail.com) to discuss.
5. A completed entry form, display and judging information form and a photo for each part must be sent to the Parts Competition Chair by **Oct. 2, 2015**.
6. A Display Form will be provided by the Parts Competition Committee using information contained in the entry form.
7. The Judging Committee may consolidate parts in categories, if fewer than 4 parts are submitted in a category.
8. No electric power connections are provided. If needed, power may be arranged through the hotel by contacting meeting services at 773-693-4444.
9. No business cards, marketing materials, laptop presentations, etc. may accompany the part in the display area. The display is intended to be an exhibit to encourage discussions and technology exchange. No sales or marketing activities in this area will be permitted; however, there are conference sponsor opportunities to do so (visit [www.blowmoldingdivision.org](http://www.blowmoldingdivision.org))
10. All shipments must follow the mailing label format as indicated in Shipping Information on the application.
11. Submitters will be responsible for collecting, unpacking and setting up their parts in the Parts Competition area located outside the ABC 2015 Exhibit Hall. Set-up hours are Mon., Oct. 12<sup>th</sup> from 8:00-5:00 p.m. **All displays should be set-up by 5:00 p.m. on Oct. 12<sup>th</sup>.** For more information about shipping and retrieving your parts, please contact Ms. Christine Engel, Sheraton Station Square at (412) 803-3871.
12. Submitters will be required to pack and prepare their parts for outgoing shipment by 5:00 p.m., Wed., Oct. 14<sup>th</sup> which marks the conclusion of the Blow Molding Conference. The SPE Blow Molding Division is not responsible for any unclaimed parts after ABC 2015 concludes.
13. The Blow Molding Division winners will be announced at ABC 2015 Awards Reception and Program on Tues., Oct. 13<sup>th</sup> at the Sheraton Station Square Hotel.

### RELEASE OF LIABILITY

Submission of an entry releases from liability, indemnifies and holds harmless the Society of Plastics Engineers Blow Molding Division, Directors, volunteers, employees or agents representing or related to The Society in part or whole. This release is for any and all liability for property losses and/or damage occasioned by, or in connection with any activity or accommodations for this event. Submission of an entry further agrees to abide by all the rules and regulations promulgated by the SPE Blow Molding Division and/or its affiliate groups or vendors throughout this conference event.

### RELEASE OF PUBLISH

Submitters and individual category winners may receive publicity in trade journals or other publications. Submission of an entry constitutes acceptance of said publicity and confirms that the submitter has secured the necessary approvals to participate in the Blow Molded Parts Competition and to be featured in any subsequent publicity.



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## 2015 PE pricing report

PE prices found new support during March-May 2015 from both domestic and international demand, with some HDPE spot prices rising 10 cpp over the period. The picture was not so bullish for PE feedstocks: Ethylene monomer prices leveled off in the mid-30s cpp, while further upstream, natural gas liquids turned decidedly lower in May, laid low by weaker crude prices, continued rampant production and --- for some purity products such as butane --- the fall-off of seasonal demand.

For NGLs, propane and butane both touched record lows in late May, according to PetroChem Wire price data going back to 2009. Propane was assessed at 37.75 cpg on May 28 as seasonal heating demand collapsed, shale production continued to show increases and storage along the Gulf Coast reportedly approached capacity. Butane, meanwhile, also hit an all-time low, assessed at 48.5 cpg on May 28 as the summer gasoline blending season --- when less butane is used in the mix --- came to an official end May 1. Ethylene cash costs for both propane and butane slipped into negative territory during the last week of May.

Spot ethylene at the Mont Belvieu hub, which had kicked off the year at 43 cpp, was trapped in a range of 35-37 cpp during May. Further losses in the ethylene market were likely stemmed by a number of unplanned ethylene unit shutdowns in the US Gulf, plus the unexpectedly prolonged outage of the Williams unit at Geismar. Ethylene exports also came in to play, as spot cargoes were reportedly loading for Asia, where ethylene was tight.

For PE, March was the beginning of a surge in export sales that cleared the market of excess inventory and set the stage for 5 cpp price increase initiatives in May. Mar-Apr export sales were stronger than any two-month period since Nov-Dec 2013, and the resulting logjam of product at the Houston ports persisted through May. The run-up in export volumes was accompanied by spot price increases: HDPE blow mold railcars had been trading in the upper 40s cpp and low 50s cpp for much of March. By the second half of May, offers had pushed up to 59-60 cpp (although buying interest was weaker).

In the domestic secondary market, offgrade HDPE frac melt – which had stabilized around 52-53 cpp during February – rose by about 10 cents over the next three months, closing the gap on generic prime HDPE blow mold resale prices, which were reported in the upper 60s cpp for May.

PE price momentum appears to be faltering as the market shifts its attention to June business. Both domestic and export demand have cooled off in May, and there were signs of easing international prices toward the end of the month. Upstream, Williams' Geismar cracker is expected to ramp up to its newly expanded capacity in June, which will benefit ethylene consumers in Louisiana, including ExxonMobil's Baton Rouge PE operations. Also bringing more ethylene supply to Louisiana in June, Boardwalk Pipeline Partners is expected to restart the flow of ethylene through the Evangeline pipeline following a lengthy outage to repair and test for leaks. The pipeline outage has been a key factor in Louisiana ethylene shortages that have restricted PE output and caused spot ethylene prices at the Louisiana Choctaw hub to trade at a large premium to Texas ethylene.

Written by: David Barry and Samantha Hartke  
PetroChem Wire editors

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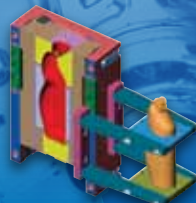
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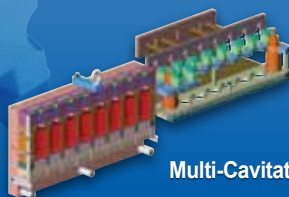
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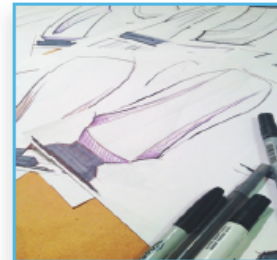
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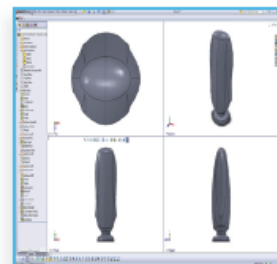
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The Blow Molding Division of the Society of Plastics Engineers and Graham Engineering Corporation co-sponsor a program for continuing education of blow molding industry workers. By making financial resources available to Blow Molding Division member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

Up to \$600 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:**

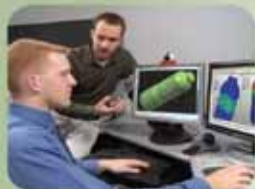
1. The employee must be a full-time employee of one of our member companies (having at least one current member of the SPE Blow Molding Division).
2. The employee's job function must be blow molding related.
3. The employee's academic training must not be higher than Associate Degree.
4. The employee 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:  
Agri Industrial Plastics  
Attn: Geoff Ward  
301 N. 2nd St  
Fairfield, IA 52556  
[geoff.ward@aipcompany.com](mailto:geoff.ward@aipcompany.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.



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# Fundamentals of Blow Molding

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*Presented by*



**and the  
Society of Plastic Engineers  
Blow Molding Division**

## **Outline Day 1**

- Safety
- Types of machines used
- Melting and screws
- Learn to speak HDPE
- Startup and shutdown
- Troubleshooting
- Melt fracture
- Controlling oxidation/burn
- Programming
- Tooling adjustment

## **Outline Day 2**

- Troubleshooting continued
- Parison adjustments
- Safety features
- Start-up procedures (specific to machine)
- Tail length and bottle weight adjustment with programmer and RPM
- Cycle adjustment and effect on overflow volume

The SPE Blow Molding Division has partnered with Calhoun Community College's Workforce Solutions division to conduct blow molding technical training. Classes were conducted in October 2014 and February 2015 with attendees from Alabama, Tennessee, Georgia, North Carolina, Missouri, Texas, and Washington. The two day course was held at Calhoun's campus in Decatur, Alabama. The equipment for the training was provided by Jackson Machinery, Wittmann Battenfeld, Inc., and Invensys Eurotherm. HDPE resin was provided by Ineos O&P, USA. David Calderone and Bob DeLong developed the curriculum and were the instructors for the course.

Continued on next page

### Feedback from a course attendee:

“The class was excellent in terms of the subject material presented.  
It was very clear that both Bob and David are experts in blow molding.  
Moreover, they articulated the material in a manner that made it easy to comprehend.”  
Peter Martin, Univation Technologies

**The next classes are scheduled for June 15-16, and September 14-15, 2015.**

For more information go to:

<http://www.blowmoldingdivision.org/fundamentals-of-blow-molding-seminar/> or

[https://www.calhoun.edu/workforce\\_development/workforce\\_solutions/industrial\\_technologies.aspx](https://www.calhoun.edu/workforce_development/workforce_solutions/industrial_technologies.aspx)



***Blow Molding Lab***



***Blow Molding Classroom***

The Blow Molding Division's Continuing Education Grant Program cosponsored by Graham Engineering was used to assist attendees of this course from Cox Container and Arch Plastics Packaging. For more information on this grant program see:

<http://www.blowmoldingdivision.org/scholarships-workplace-training/>



The Society of Plastics Engineers Blow Molding Division, along with Calhoun Community College proudly presents:

# The Fundamentals of Blow Molding

## A TWO - DAY COURSE

Calhoun Community College - Aerospace Training Center

June 15 - 16, 2015 and September 14 - 15, 2015

### DAY ONE

- SAFETY
- TYPES OF MACHINES USED
- MELTING AND SCREWS
- LEARN TO SPEAK HDPE
- STARTUP AND SHUTDOWN
- TROUBLESHOOTING
- MELT FRACTURE
- CONTROLLING OXIDATION/BURN
- PROGRAMMING
- TOOLING ADJUSTMENT

Optional Group Dinner

### DAY TWO

- TROUBLESHOOTING CONTINUED
- PARISON ADJUSTMENTS
- SAFETY FEATURES
- START-UP PROCEDURES  
(Specific to machine)
- TAIL LENGTH AND BOTTLE WEIGHT  
ADJUSTMENT WITH PROGRAMMER  
AND RPM
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[www.blowmoldingdivision.org/fundamentals-of-blow-molding-seminar](http://www.blowmoldingdivision.org/fundamentals-of-blow-molding-seminar)



David Calderone is president of Alternatives 4 Plastics, a common sense and hands-on consulting firm for the plastic blow molding industry. David has been in the blow mold industry for 45 years and was a plant manager by the age of 25. David's career began on the floor packing and over time, becoming an operations manager overseeing a 300 employee plant with three unions in the facility. Mauser Group, Consolidated Container, Clearglass Containers and Liqui-Box are just a few of the bigger corporations David has worked for. His career includes many start-to-finish projects with large companies such as J&J, Zimmer Patient Care, Corning, and several medical companies and cosmetic companies like Victoria's Secret, Bath & Body Works, and Crabtree & Evelyn.

As a co-owner in the fast growing business of personal care containers, David managed the operations. Later the company was purchased by one of the top 10 ranked blow molding companies in the country, and is still in operation today.

David interacted closely with the State's Industrial Development Boards while building two green field plants from start to finish. He even served on one of the Industrial Development Boards after building a plant in their area.

David presently serves on the Society of Plastics Engineers Blow Molding Division Board of Directors and is Chair of the Division's Training Sub-Committee.



Bob DeLong's career in plastics started in R&D at Hercules Powder in 1956, working on applications for the then-experimental Polypropylene. He blew the world's first PP bottles using a hand-operated machine built by Plax. In the 1960's, Bob led Celanese's (now Ineos) customers on processing techniques during the milk container's explosive growth period. Operator training was a key ingredient as the dairies moved to self manufacture, and this was the beginning of his teaching and consulting. Bob also taught semester courses in blow molding in Newark College of Engineering's associate degree program.

Bob spent 21 years as a senior consulting engineer at Solvay's Tech Center in Houston, active in all aspects of HDPE and PP blow molding. This included resin formulation, molds and tooling, field service, and training. End-uses ranged from household chemicals to multi-layer atmo gas tanks to extra large parts such as septic tanks.

A long time member of the SPE, he became a senior member in 1969, elected a Fellow of the Society in 2002, and received the Blow Molding Division's Lifetime Achievement Award in 2004. Bob served on Blow Molding Division's Board from 1995 until 2006, and is a frequent presenter at the Annual Blow Molding Conference. Bob is published in *Modern Plastics*, *Canadian Plastics*, *Plastics Technology*, as well as in several molding handbooks.

A member of the SPE since 1957, he became a Senior member in 1969, elected a Fellow of the Society in 2002, received the Blow Molding Division's Lifetime Achievement Award in 2004, and was inducted into the SPE's Plastics Hall of Fame in 2015.

This course has been initiated by the Society of Plastics Engineers Blow Molding Division in conjunction with Calhoun Community College. It is designed to give a better understanding of the Plastic Blow Molding process in North America. This course is designed for both students as well as those currently employed within or around a plastics blow molding business.

[calhoun.edu/workforcesolutions](http://calhoun.edu/workforcesolutions)



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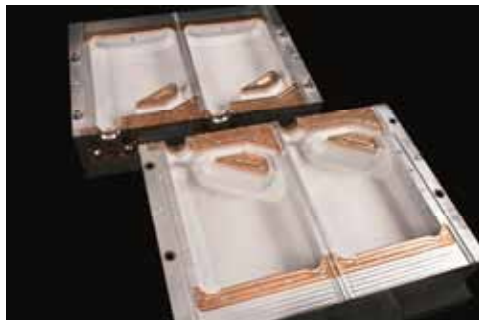
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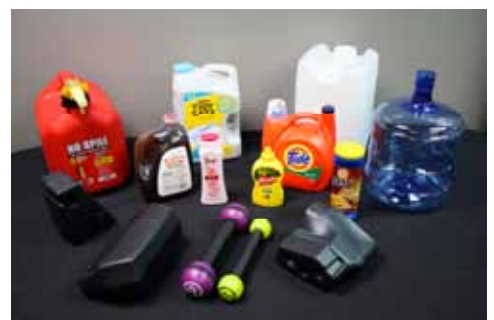
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## **BOD Meeting held March 25, 2015 at Marlow's Tavern**

### ☐ **Welcome - Jeff Light**

**BOD members present:** Ron Puvak, Ben Lopez, John Rathman, Lew Ferguson, Jeff Light, Henry Vogel, George Hurden, David Calderone, Mike Hall, Randy Moynihan, Scott Steele, Piaras de Cleir, Bob Jackson, Mark Heitker, Gary Carr, John Rathman, Terry Glass, Surendra Agarwal, Jamie Pace, Ken Carter, Kathryn Birchmeier, Don Maines

**Guests:** Don Peters, Bob DeLong

### **Ron Puvak opened the meeting at 6:00 P.M.**

Jeff Light welcomed all present.

- The financial status of the Blow Molding Division is in good condition - Terry Glass
- Flyers for ABC are available for distribution and at NPE booths - Brian Spence

**Motion to approve the minutes of the last meeting.** Jeff Light, Ken Carter 2nd. Approved.

### ☐ **New Business**

No new business

- Motion to adjourn the meeting 6:10 - Jeff Light, Ken Carter 2nd. Approved.

## **Annual Business Meeting held March 26, 2015**

***Orange County Convention Center - Orlando, Florida***

### ☐ **Welcome by Randy Moynihan**

**BOD members present:** John Rathman, Kathryn Birchmeier, Poaras De Cleir, Randy Moynihan, Lew Ferguson, George Hurden, Ken Carter

No other attendees.

### **Randy Moynihan opened the meeting at 4:30**

- The financial status of the Blow Molding Division is in good condition as reported by Treasurer Terry Glass and approved in the BOD meeting.

### ☐ **Discussion:**

The Best ANTEC paper for 2015 was awarded to Steve Sopher from JSP.  
Discussed Student Paper timelines.  
Follow up on ABC duties - Randy Moynihan

### ☐ **New Business**

- The gavel was passed from Jeff Light to Jamie Pace, new Blow Molding Division Chair.
- Motion to adjourn the meeting 4:40 - Randy Moynihan, Lew Ferguson 2nd. Approved.



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### Kautex Maschinenbau

contributed \$4000 to our general education fund

### ALPLA

contributed \$4000 to our general education fund

### Graham Engineering Corporation

contributed \$2000 for the Continuing Education Grant Program

### CKS Packaging

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### Nissei ASB

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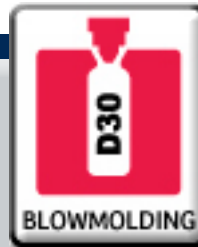


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Jamie Pace  
Nissei ASB Company  
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Atlanta, GA 30336  
Ph: 404/969-3105 Fax: 404/696-9009  
Cell: 404/502-4508  
E-mail: j.pace@nissei-asbus.com

## CHAIR-ELECT



Cal Becker  
Eastman Chemical Co.  
137 Regional Park Dr.  
Kingsport, TN 37660  
Ph: 301/606-2544  
E-mail: cjbecker@eastman.com

## PAST CHAIRPERSON



Jeffrey S. Light  
Amco Polymers LLC  
43 Forest Glen Drive  
Hope Valley, RI 02832  
Ph: 401/486-3250 Fax: 401/486-9523  
E-mail: JLight@AmcoPolymers.com

## FINANCE CHAIRPERSON, COUNCILOR



Scott Steele  
Plastic Technologies, Inc.  
1440 Timberwolf Drive  
P.O. Box 964  
Holland, OH 43528  
Ph: 419/867-5403 / 867-5400  
Fax: 419/867-7700 Cell: 419/392-2711  
Email: s.steele@plastictechnologies.com

## SECRETARY



George Hurden  
Kautex Machines Inc.  
01 Chambers Brook Road  
North Branch, NJ 08876  
Ph: 908/252-9350 Cell: 203/605-3305  
E-mail: George.Hurden@Kautex-Group.com

## TREASURER



Terry Glass  
Mars, PA 16046  
Cell: 979/236-3617  
E-mail: tglass002@hotmail.com

## TECHNICAL PROGRAM CHAIRPERSON



Surendra Agarwal  
Creative Group of Industries  
501, Embassy Center  
Nariman Pt., Mumbai 400005  
Ph: 91-22-4078-0000 FX: 91-22-4078-0023  
Cell: 91-98-2091-2457  
E-mail: surendra@creativeplasticindia.com

## EDUCATION CHAIRPERSON



Geoff Ward  
Agri Industrial Plastics  
301 N. 22nd Street  
Fairfield, IA 52556  
Ph: 641/472-4188 FX: 641/472-7120  
E-mail: geoff.ward@agriindustrialplastics.com

## MARKETING CO-CHAIRPERSONS



Brian Spence  
Cell: 919/475-0692  
E-mail: bspence@yahoo.com



Gary Carr  
Bekum America Corp.  
1140 W. Grand River  
Williamston, MI 48895-0567  
Ph: 517/655-7135 FX: 517/655-4121  
Cell: 517/881-5764  
E-mail: gcarr@bekumamerica.com



George Rollend  
DAK Americas, LLC  
38 Green Road, Amherst, NH 03031  
Ph: 603/672-6403 Cell: 302/547-1054  
E-mail: grollend@dakamericas.com

## MEMBERSHIP SUB-COMMITTEE CHAIR



Henry Vogel  
Heise Industries  
196 Commerce St.  
E. Berlin, CT 06023  
Ph: 860/828-6538 Cell: 610-349-0164  
E-mail: henryv@heiseindustries.com

## NEWSLETTER EDITOR



Ron Puvak  
Plastic Technologies Inc.  
1440 Timberwolf Drive  
Holland, OH 43528  
Ph: 419/725-5613 Cell: 419/708-1486  
E-mail: r.puvak@plastictechnologies.com

## AWARDS SUB-COMMITTEE CHAIR



John Rathman  
Chevron Phillips Chemical Co. LP  
Plastics Technical Center, Room 155  
Highways 60 & 123  
Bartlesville, OK 74003-6670  
Ph: 918/977-4879 FX: 918/977-7599  
Cell: 918/327-9378  
E-mail: rathmjr@cpchem.com

## WEBSITE SUB-COMMITTEE CHAIR



John Sugden  
The Dow Chemical Company  
4333 Building Midland, MI 48667  
Ph: 989/636-9533 Cell: 989/245-0819  
E-mail: jlsugden@dow.com

## TRAINING SUB-COMMITTEE CHAIR



Dave Calderone  
Alternative 4 Plastics LLC  
2218 Kadyday Way, Murfreesboro, TN 37128  
Cell: 615/785-4226  
E-mail: david.calderone20@comcast.net

## STUDENT DESIGN COMPETITION SUB-COMMITTEE CHAIR



Ken Carter  
Deere & Company  
One John Deere Place, MTIC  
Moline, IL 61265  
Ph: 309/765-3765 Cell: 608/432-9457  
E-mail: CarterKennethJ@JohnDeere.com

## SCHOLARSHIPS SUB-COMMITTEE CHAIR



Mark Heitker  
INEOS Olefins & Polymers, USA  
Technical Center  
1230 Independence Parkway South  
LaPorte, TX 77571  
Ph: 713/307-3702 FX: 713/307-3521  
Cell: 713/819-3702  
E-mail: mark.heitker@ineos.com



Gerald Hobson  
Hobson Consulting LTD  
21721 Wildwood Place  
Shell Rock, IA 50670  
Ph: 319/885-6564 Cell: 319/230-0994  
E-mail: ghobson@hobson.com



Randy Moynihan  
Chevron Phillips Chemical Co. LP  
205 PTC/BTC, Highways 60 & 123  
Bartlesville, OK 74004  
Ph: 918/661-0640 Fax: 918/661-0311  
Cell: 918/440-4090  
E-mail: MOYNIRH@cpchem.com



Mohammed Usman  
Ford Motor Co.  
20000 Rotunda Drive, Suite 24G23  
MD 1222  
Dearborn, MI 48124  
Ph: 313/805-9797 FX: 313/621-4707  
E-mail: musman@ford.com



Piaras de Cléir  
Kraft Foods  
555 S. Broadway  
Tarrytown, NY 10591  
Ph: 914/425-6218 Fax: 914/425-6218  
Cell: 914/656-2969  
E-mail: pdecleir@kraft.com



John Headrick  
NAMPAC  
4101 Lake Boone Trail, Suite 201  
Raleigh, NC 27607  
Ph: (905) 751-1828 FX: (905) 751-2390  
E-mail: john.headrick@nampac.com



Mike Hall  
Kyoda America Industries Co.  
850 Progress Center Ave.  
Lawrenceville, GA  
Ph: 770/237-0364 Cell: 706/799-1761  
E-mail: mike@kyodoamerica.com



David Hayward  
Silgan Plastics  
1858 Meca Way  
Norcross, GA 30098  
Ph: 770/243-5201 Cell: 678/772-9458  
E-mail: d.hayward@silganplastics.com

## PARTS COMPETITION COMMITTEE CHAIR



Lewis Ferguson  
Parisons  
9900 Sunset Drive  
Stone Harbor, NJ 08247  
Ph: 609/368-7230 Cell: 313/506-4637  
E-mail: parisons@aol.com



Kathy Birchmeier  
Kraft Foods  
801 Waukegan Road  
Glenview, IL 60025  
Ph: 847/646-3699 Cell: 847/331-4148  
E-mail: kathryn.birchmeier@kraftfoods.com

## NOMINATIONS COMMITTEE CHAIRPERSON



Benjamin Lopez  
Kautex Maschinenbau GmbH  
Kautexstrasse 54  
Bonn, Germany 53229  
Ph: 0049/170 7850887  
FX: 0049/228 489 404 Cell: 517/402-6346  
E-mail: benjamin.lopez@kautex-group.com



Donald Maines  
Triad Precision Products  
128 Sunrise Center Drive  
Thomasville, NC 27360  
Ph: 336/474-0980 FX: 336/474-0981  
Cell: 336/880-1526  
E-mail: donm@triadpp.com



Dale Klaus  
Quality Custom Molding  
209 W. Main  
Linn, MO 65051  
Ph: 573/897-4166 Fax: 573/897-3482  
Cell: 314-223-5483  
E-mail: dKlaus@qualitycustommolding.com



Rama Etekallapalli  
Arch Plastics  
2010 Polymers Drive  
Chattanooga, TN 37921  
Ph: 423/553-7751 Cell: 765/404-9967  
E-mail: retekallapalli@archplasticsllc.com



Bob Jackson  
Jackson Machinery, Inc.  
3830 Highway H  
Port Washington, WI 53074  
Ph: 262/284-1066 FX: 262/284-5466  
Cell: 414/828-3830  
E-mail: bobJ@jackson-machinery.com

## Emeritus



Robert DeLong  
Blasformen Consulting  
4914 Maple Terrace  
Kingwood, TX 77345  
Ph: 281/360-5333  
E-mail: done7106@earthlink.net



Robert Slawska  
Proven Technology, Inc.  
5 Woodshire Way  
Hillsborough, NJ 08844  
Ph: 908/359-7888 or 908/759-2407  
Fax: 908-359-1006  
E-mail: rslawska@aol.com



Don Peters  
Phillips Chemical-Retired  
154 PTC, Highway 60 & 123  
Bartlesville, OK 74004  
Ph: 918/661-3117 FX: 918/662-2220  
E-mail: judopeters@aol.com

## Affiliated Members



Deirdre Turner  
42 Regal Drive  
Rochester Hills, MI 48037  
Ph: 248/505-5136  
E-mail: dturner@earthlink.net



Jon Ratzlaff  
Chevron Phillips Chemical Co. LP  
Plastics Technical Center  
Highways 60 & 123  
Bartlesville, OK 74004  
Ph: 918/661-3127  
E-mail: RATZLJD@cpchem.com

## Active Members



Jonathan A. Meckley  
Penn State Erie  
Burke Center - School of Engineering  
5101 Jordan Road, Erie, PA 16563  
Ph: 814-898-6147 FX: 814-898-6006  
Cell: 814-572-2934  
E-mail: jmeckley@psu.edu



Mark Barger  
The Dow Chemical Company, Inc.  
200 Larkin Center  
1605 Joseph Drive  
Midland, MI 48674  
Ph: 989/636-1263 FX: 989/636-0194  
Cell: 989/906-2083  
E-mail: mabarger@dow.com



Mridula (Babli) Kapur  
The Dow Chemical Company  
Basic Plastics R&D  
2310 N. Brazosport Blvd, B-1470-D  
Freeport, TX 77541-3257  
Ph: 979/238-5684 Fax: 979/238-0488  
Cell: 979/665-1611  
E-mail: mkapur@dow.com



Daryle Damschroder  
D2 Blow Molded Solutions  
930 Ohio Ave.  
Elmore, OH 43416  
Ph: 419/862-3134 Cell: 419/680-4234  
E-mail: ddamschroder@woh.rr.com



Timothy W. Womer  
TW Womer and Associates, LLC  
262 East River Road  
Edinburg, PA 16116  
Ph: 724/355-3311  
E-mail: Tim@TWWomer.com

Jack McGarry  
MBK/Blow Molding Machinery, LLC  
6 Towpath Way  
New Hope, PA 18938  
Ph: 215/630-2892 FX: 215/862-4963  
E-mail: beige2@aol.com



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