

SPE THE SPECIALIST

February 2008

Volume 35

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Section Mini-Tech

TUESDAY FEBRUARY 12, 2008

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12:30 PM REGISTRATION 1:00 – 5:00 PM SEMINAR

SEPRO AMERICA

HOW TO HIRE A ROBOT

Jim Healy and Charles Rosseel

There are many differences between hiring a robot and hiring an operator. You can and need to expect a great deal from a robot. The topic of this 2 part presentation covers the process of deciding when and how to apply a robot, determining a good application, and once you have determined an application how to select the right type of robot for that application. In addition, this presentation will review the different types and levels of robots that pertain to injection molding from simple Sprue pickers, to 3 axis servo robots, to articulated arms for post molding operations. Furthermore, what a processor should expect from a supplier will be covered.

After briefly reviewing the types of robots in the marketplace we will do an extensive review of various applications that are typical of plastic processors. We will review applications that have been presented to us and the solutions that were proposed. These different applications that will be reviewed include Insert Loading, Degating, Cooling, Palletizing, Packaging, Conveying, Feeding Systems including Feeder Bowls, and In Mold Labeling.

HUSKY HOT RUNNERS

BETTER PARTS, FASTER CYCLES: ADVANCES IN HOT RUNNER SYSTEMS

Tom Cowan - Husky Hot Runners

- Hot runner thermal control
- Hot runner balance and design
- Melt Mixing technologies
- Stack Molding Technologies

Tom Cowan is a native of the Chicago area. He spent over 20 years working as a mold maker for Plano Molding, Plano II. and Armin Industries, South Elgin, Illinois. In those roles, he was able to distinguish differences and common issues pertaining to hot runners and molding. Since 2000, he has been employed by Husky Injection Molding Systems, helping customers to properly select hot runner systems and molding machines.

HUSKY HOT RUNNERS

SIMULATION AND PROCESS OPTIMIZATION IN DEVICE MANUFACTURING

Joe Fox - Husky Hot Runners

Joe Fox is a native of Eastern Canada. He obtained his first degrees at McGill University and his PhD from Cambridge. Over the past 20 years Joe has worked in business development functions in both the process industries and in discrete manufacturing and with an emphasis on automation. Over the past decade his focus has been the medical and pharmaceutical sectors. Joe joined Husky in early 2007 to head up the company's growth strategy in medical.

For reservations or questions,

email Sean Mertes (sdmertes@ashland.com) or Jeff Voelker (jeffrey.voelker@sabic-ip.com).

If you don't have access to the internet then call Sean Mertes at 612.801.2417

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President Remarks

Paul Rothweilert

In my last column I spoke about the great foundation we have in the Upper Midwest Section. I'd like to spend this column reviewing some of those strengths. Let's start with the Mini-Tech's. The last Mini-Tech was a good example of the excellent planning processes the Board has put into place, com-



combined with the exceptional presenters that are eager to participate. To demonstrate how effective the Mini-Tech's are, I will share with you information about a phone call I received from one of the presenters today. As expected he thanked us for putting on a great event and allowing them to participate. Then he did something unexpected, he asked if he could attend future meetings. That would not be an unusual request until you consider that he lives and works 2,000 miles from here. We must be doing a lot of things right if someone is willing to travel that far to attend our MiniTech's. Before I leave the subject of Mini-Techs, make sure you attend Husky Injection Molding System's presentation at the February Mini-Tech, and to stay afterward for some informal networking.

In addition to the Mini-Tech's, we have a nationally recognized newsletter. I believe one of the newsletter's strengths is the locally developed articles like those for the "Material of the Issue" portion of the newsletter. Future newsletters will continue to contain articles written on subjects of interest to, and by, members of our Section. Currently under development is a series of articles on plastics in the medical market. Please make sure to contact one of the Board members if you are interested in contributing an article to the newsletter.

Finally, I think the greatest strength of the Section is the members. There are many good companies in our Section and during meetings there is always a solid exchange of information. I am glad this is our greatest strength, because the primary purpose of our Section is to provide a vehicle for members to come together and grow. During 2008 the Board has plans to grow the Section by attending trade shows and visiting local companies. We encourage members to join us at these exhibitions, or to stop and say "hello." I also encourage you to bring along your colleagues who are currently not members, to learn about the benefits of being a member.

See you at the February Mini-Tech!



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2007 CME SCHOLARSHIP PRESENTATION

The SE MN Branch of the Society of Plastics Engineers (SPE) in conjunction with the Winona Area Composites Consortium (WACC) and the Winona State University (WSU) Foundation continued its support of Winona State University's Composite Materials Engineering program with a \$4230 gift for student scholarships. Larry Rupprecht, golf event director, made the presentation to Mike Swenson of the WSU Foundation on November 16, 2007.

GOLF OUTING

The SE MN chapter of SPE co-sponsors a golf outing at Cedar Valley Golf Course to fund the scholarship program. The annual golf outings are well supported by the local plastics industry, the WSU engineering department and COMTEC, and by many national and international suppliers of raw materials and goods to the local plastic industry. The 2008 event is scheduled for June 9 at Cedar Valley Golf Course.



PRESENTATION OF 2007 CONTRIBUTION TO MIKE SWENSON, WSU FOUNDATION BY LARRY RUPPRECHT



2007-08 STUDENT RECIPIENTS, SHASHANK SHARMA AND SANTHOSH CHANDRABALAN, PRESENTED THEIR AWARDS BY LARRY RUPPRECHT

1ST PLACE TEAM AT THE GOLF OUTING, INCLUDING LARRY STOLTMAN, BRIAN EVENSON, BRIAN MUELLER, AND NALMER NELSON, ALL OF RTP COMPANY.



December Mini-Tech *MOISTURE ANALYSIS DRYERS*

Arizona Instruments is dedicated to promoting precision moisture analysis instruments that are accurate, reliable and easy to use. Over the years, the company has expanded its competitive line and has become an accepted leader in moisture analysis.

Choosing the best dryer for our needs was covered by Conair for the 2nd topic of the Mini-Tech. Dryers are an indispensable cost of production. Used properly, they ensure that the parts or products made will be free of defects caused by water. This program addressed advantages and disadvantages of different drying technologies, limitations and capabilities.

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The Society of the Plastics Engineers (SPE) and Plastics News are joining forces again this spring to offer an international-scale conference and exhibition.

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- Enjoy FREE Refreshments and Entertainment at the Welcome Reception on Monday, May 5, and a Networking Reception on the show floor, Tuesday, May 6.

Visit www.antec.ws to view preliminary session details or www.plasticsencounter.com for all tradeshow details.

Presentation and paper titles will be published on the ANTEC website in February. The ANTEC Advance Program will be posted to the website in February and inserted in your March issue of Plastics Engineering.

Event Highlights

Monday, May 5: Exhibit Hours: 3 p.m.-6 p.m. • Welcome Reception: 6 p.m.-8 p.m.

Plenary Speaker: Ed Barlow, President, Creating the Future, Inc.

"A Journey Through the 21st Century"

Tuesday, May 6: Exhibit Hours: 12 noon-6:30 p.m. • Networking Reception: 4:30 p.m.-6:30 p.m.

Plenary Speaker: William F. Banholzer, Corporate V.P. and CTO, The Dow Chemical Company

Challenges and Opportunities in Future Feedstocks for the Plastics Industry

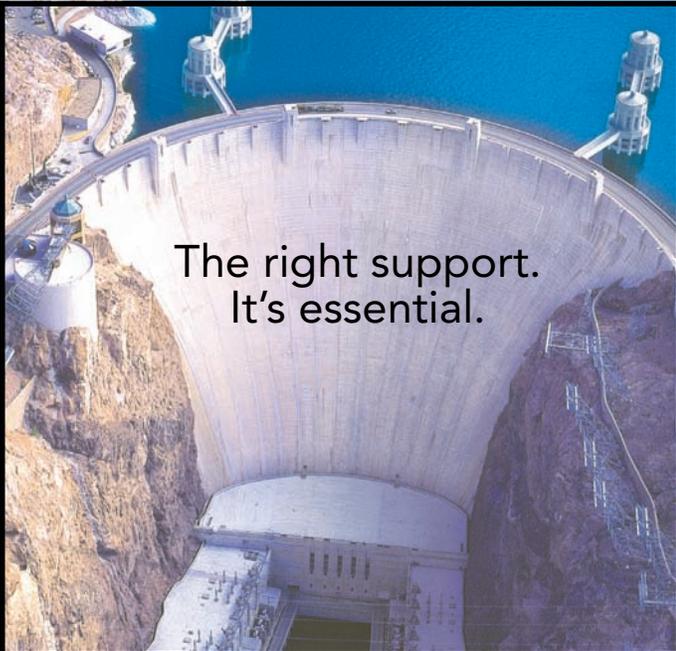
Wednesday, May 7: Exhibit Hours: 10 a.m.-3 p.m.

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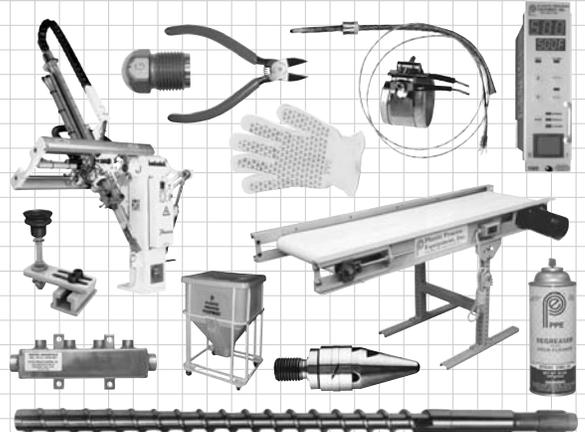


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Councilor's Corner - *Tom McNamara*

This is one of those 'in between' Councilor's columns because this newsletter is coming out before our next council meeting. As such, I do not have meeting news to report. However, between council meetings much activity is always in motion with the numerous committees that make SPE International work.

I am a participant on both the Student Activities Committee and the Education Awards Committee. I believe these two committees are extremely important as the first is involved with students, who are the future of our industry, and the second is involved with education, which is the main charter of the Society of Plastics Engineers.

The Student Activity Committee has a standing annual function of planning the Student Award Reception and the Student Activity Evening at ANTEC. This committee also solicits funds to support these activities for the students. In addition to these planning functions, this committee has also established some goals to improve our interaction with students. One concept being explored is a "Career Night" at ANTEC to allow students to either interact with industry or have electronic bill-board / job board for students to review the needs in the industry. A second goal is to establish a "Check-list" of best practices for interactions with Student Chapters so Sections can improve their support of the Student Chapters within their geography. A third goal is to work with the ANTEC committee to establish a student job fair.

As a member of the Education Awards committee, I am participating in a 'contact blitz' to inform and promote the various awards that are available to both Sections and Student Chapters. In past years we have not had very good participation in these education awards and we are making a more concerted effort to increase applications for these awards. We have the Husky Award, which is a \$5000 award for the Section with the best proposal to promote plastics education. There is a Chase Plastics Award, which is a \$2500 award for the Student Chapter with the best educational plan for the future use of the award money. And there is an Outstanding Student

Chapter Award, which is a \$500 award to Student Chapters whose programs, activities, and levels of participation are especially noteworthy. Numerous chapters can win this award.

The last thing that I would like to report on and promote is the Upper Midwest Section Mini-Techs. We had a successful Mini-Tech in December with presentations from Arizona Instruments on moisture analyzers and Conair on drying equipment and fundamentals. We had an attendance of over 20 in addition to some of the Hennepin Technical College (HTC) students. We have another Mini-Tech coming up on February 12 at the HTC facility. We will have speakers from Husky Injection Molding Systems on 'Hot Runner Systems and Process Optimization' and a presentation on 'How to Hire a Robot presented by gentlemen from Sepro America. Please consider attending these economical and informative sessions and also use the time to interact with others in our industry. Networking is an important benefit of participation in the SPE!!!

The logo for ANTEC, consisting of the letters A, N, T, E, and C stacked vertically in a large, bold, black, sans-serif font.

May 4 - 8, 2008

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Polyamides

The third material in our series is polyamides, popularly known as Nylon. They are among the most versatile and durable of the plastics. They are also considered to be the first engineering thermoplastic. For classification purposes, they are a semi-crystalline polymer. However, amorphous versions are available. They are called polyamides because they contain an Amide group as a recurring part of their molecular chains. Polyamides are manufactured through two principal routes: Combining Adipic acid and Hexamethylene Diamine yields polyamide 66: polymerizing capro lactum yields polyamide 6. Different types of polyamides are identified by a nomenclatures which corresponds to total numbers of carbon atoms in their monomers. In addition to polyamide 66 and 6, there are 69, 610, 612, 11,12,46 and 1212. From the perspective of a design and performance, polyamide 66 and 6 are largely in their end uses, with a few exceptions. Polyamides are available in a variety of grades, including general purpose which can be unreinforced or reinforced; impact modified grades, unreinforced or reinforced but with superior impact resistance and reduced moisture grades available as glass and/or mineral reinforced or both reinforced and impact modified. There are also flame retardant grades and grades for medical devices. The North American market is divided into four major segments. The largest is extruded film, which is made film polyamide 6. There are many modified grades in this segment. The second segment is automotive. This is there largest market for polyamide 66. There are many modified grades in this segment. The third segment is the electrical/electronics market, primarily for connectors, switches and housings. The fourth is the consumer applications such as power tool housings, TD textiles, to fishing line. The latest involvement is applications using nano technology. Polyamides are very versatile.



Society of Plastics Engineers Membership Application

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Upcoming Conferences, Seminars and Events

- February 25-28, 2008** **SPE Polytech, Polymer Technology Seminars**
Held in conjunction with the SPE International Polyolefins and FlexPackCon® Conferences
Marriott Houston North at Greenspoint Hotel, Houston Texas
Contact: www.4spe.org for a complete list of PolyTech Seminar descriptions
- February 24-27, 2008** **SPE's Polyolefins and FlexPackCon® 2008**
Wyndham Hotel, Houston Texas
Contact: Bill Diecks, 281-381-1264 or bill.diecks@ametek.com
- March 9-12, 2008** **SPE's Global Plastics Environmental Conf. 2008**
Orlando, Florida
Contact: Gwen Mathis, 705-235-9298 or gwensmathis@aol.com
- March 24-26, 2008** **SPE's Automotive Injection Molding TopCon**
Greenville, South Carolina
Contact: Michael Uhrain, 440-292-5112 or michael.uhrain@dgp.com
- April 6-10, 2008** **Symposium on Nonlinear Dynamics in Polymer Systems**
New Orleans, Louisiana
Contact: Jon A Pojman, 601-266-5035 or john@pojman.com
- April 13-15, 2008** **Hollow Parts Conference**
Shanghai, China
Contact: Jon Ratzlaff at ratzljrd@cpchem.com
- May 4-8, 2008** **Plastics Encounter at ANTEC™ 2008**
Midwest Express Center and Milwaukee Hilton City Center, Milwaukee WI
Contact: Leslie Kyle, 203-740-5452 or antec@4spe.org
- October 21-23, 2008** **Plastics and Rubber Vietnam 2008**
Ho Chi Minh City, Vietnam
Contact: Messe Dusseldorf North America, 312-781-5180 or info@mdna.com
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TWIN CITY AREA CALENDAR

Mini Seminar February 12, 2008
Hennepin Technical Ctr, North Campus

ANTEC May 4 - 8, 2008
Milwaukee Wisconsin

Plastics Encounter Trade Show
. May 5-7, 2008
Milwaukee Wisconsin

WESTERN WISCONSIN CALENDAR

SOUTHEAST MINNESOTA CALENDAR

Golf Outing. June 9, 2008
Cedar Valley Golf Course, Winona, MN

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