Welcome to the new and improved Southern California SPE Newsletter! After a year of publishing our newsletters online, The Board has decided to revert to our “old school” avenue for publishing the newsletter in print and have it sent right to your front door. We have found that although the internet is a great resource, it does not always provide the personal touch that we were seeking. The Board hopes to offer companies that are associated within the Plastics Industry an engaging outlet for their advertising. We are confident our readers will find this new newsletter easy to follow SoCal SPE and keep up with important industry news. As always, we encourage insightful feedback from our readers.

I am thrilled to report that the Southern California Chapter will be a recipient of SPE’s 2017 Gold Pinnacle award and Communication of Excellence Award. The Pinnacle Gold is awarded to Chapters who, in addition to meeting Pinnacle Silver criteria, demonstrate superior performance in the Gold achievement categories. SPE will recognize these achievements at the Society’s 76th Annual Technical Conference at NPE this May. There is an immense amount of work, time, commitment that goes into maintaining a society and I want to thank all our Board, SoCal Members, and Sponsors. Congratulations on helping us achieve a successful 2017. Here’s looking to an even better 2018!

Sincerely,
Ashley Spittle
Southern California SPE President
Molding – Past, Present and Future

FIMMTECH INNOVATION & TRAINING CENTER
Carlsbad, CA
Thursday May 31, 2018

John Wesley Hyatt filed the patent for the first injection molding machine in 1872. Reciprocating screw was developed in 1956. Since then, there have been many advances in molding technology. However, the progress in terms of molding shop owners and technicians mind set has been painfully slow to changes. Many molders are still mired in the old habits and outdated molding practices.

The day long workshop will address the key issues facing the molders today and growth opportunities. Efficiency, improvements and profitability cannot be achieved without spending lots of money is a misconception. Maximum productivity molding with minimum expenditure will be discussed. Recognizing the fact that it is the people on the floor that make or break the operation, importance of properly training the technicians and machine operators is explored.

None of the sophisticated molding machines, skills or technology can solve molding issues stemming from the inadequate part design. For example, sink and void issues due to uneven and thick walls, non-fills and burning created by deep ribs without venting considerations cannot be simply solved by twisting knobs or punching new numbers. Learn how to solve the problems related to the part design.

Optimizing the process and making the process robust is the key to trouble free molding. How to optimize the process by creating process window and how to conduct simple DOE will be discussed.

The latest technologies from the largest plastics industry technology showcase will be highlighted. What is the future of molding? What is Industry 4.0 all about, what are Smart Factories and how molders can stay abreast, take advantage and ride the new wave to profitability will be discussed.

DATE
Thursday, May 31, 2018
TIME
9:00 – Registration
9:30 – Workshop
1:00 – Live Demonstrations
4:15 – Adjourn
LOCATION
FimmTech
5900 Sea Lion Place, Suite 140
Carlsbad, CA 92010
COST
SPE Member: $100
Non-Member: $130
(Join SPE today and save $30)
(Includes Continental Breakfast and afternoon Lunch)

SCHEDULE
9:30 to 10:30 Vishu Shah
Breaking the bad habits – A review of conventional molding practices and how to break out of the mold inhibiting the molder’s growth.
10:45 to 12:00 Tuan Dao
How a poor part design affect molder’s profitability – Simple, low cost solutions.
12 noon to 1:30 Lunch and demonstrations
1:30 to 3:00 Suhas Kulkarni
Improving the Cpk: What is Cpk (Process capability), Why is it Important and How to Improve it
3:15 to 4:15 Vishu Shah
Future trends: Equipment, Molding technologies, Automation, Industry 4.0/Smart Factories The latest from NPE.

Register On line at www.socalspe.org

SPEAKERS
Tuan M. Dao, B.Ch.E., MSME, is a Senior Consultant at the Engineering Plastics Consulting Group. He was formerly with DuPont Company and has 25+ years’ experience in Plastic Engineering with applications in various industries such as automotive, medical, electrical/electronics, irrigation, and consumer. His expertise includes product design, Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), mold design, runnerless technology, and optimum molding. He has been teaching Advanced Plastic Product Design classes at UCSD for past five years. He is a senior member, past president of So. Cal. SPE section and currently serving on board as a technical program director.

Vishu H. Shah is President of Consultek Consulting Group, a consulting firm specializing in Business Growth strategic planning and new product/Technology strategy development. His 26 years of extensive practical experience in plastics industry includes positions as president and cofounder of Performance Engineered Products – a custom injection molder, Senior Plastics Engineer of Rain Bird Corporation and NBICO Inc. His areas of expertise include product design, processing, automation, materials, rapid prototyping, tooling, failure analysis and testing. He is the author of Handbook of Plastics Testing and Failure Analysis and has taught various plastics related subjects throughout his career. Currently, he is teaching classes covering, Plastics Theory and Practice, Scientific Molding, Product Design and Tooling at CAL POLY, Pomona. An active, involved professional, he is a senior member, past president of So. Cal. SPE section, SPE Honored Service Member and a board member of SPI Western Moldmakers Division. Vishu is a graduate of UMass Lowell where he received B.S. and M.S. degree in Plastics Engineering. He has worked extensively with legal community as expert witness and provided technical support with litigation.

Suhas Kulkarni is the President of FIMMTECH, a consulting firm that specializes in services related to injection molding. He earned his Master’s in Plastics Engineering from the University of Massachusetts, Lowell and a Bachelors in Polymer Engineering from the University of Poona, India. He has 22 years of experience as a process engineer. His main area of expertise is Scientific Processing for Injection Molding. He conducts regular training seminars in Injection Molding and has developed a custom software called Nautilus, that aids the complete process development routine to production release. He is a contract faculty at UMASH Lowell and has given numerous presentations and written several articles. He is also an author of the book ‘Robust Process Development and Scientific Molding’ published by Hanser Publications.
The first ever Minitec was held in Anaheim, CA on Friday the 9th of February. The event was cosponsored by Southern California SPE and the Medical Plastics division of the SPE. The day long event had 12 speakers who gave presentations from novel technologies, advances in materials to additive manufacturing. There were close to 50 attendees with 9 table top exhibitors. We ended the day with cocktails and dinner sponsored by the Horn Company.

The Minitec event was well received by the attendees and the board felt that it was a good start to a yearly event. We hope to have such an event every year around the time of the MDM show. There are thoughts of hosting the Minitec before or after the MDM Show. We request everyone to provide their feedback. The board is hoping to obtain more of the local medical companies to participate and support. Technology is fast changing and one of the efficient avenues to get exposure to new technologies is to attend such conferences. Conferences and exhibitions provide good overviews under one roof and in a short amount of time.

The Minitec event was sponsored by several companies that included Celanese, Compuplast International, BD, The Horn Company, Emerson Branson, Thermofischer Scientific and Teel Plastics.

Our Golfers will enjoy our return to the exclusive Sierra Lavern Country Club. Located in the rolling foothills of the majestic San Gabriel Mountains, the course offers a cool climate surrounded by great natural beauty. We have an early morning shotgun start at 7:30AM with the awards luncheon following the round. Join in after the tournament for the golf awards presentation, raffle and luncheon after golf. Get your name on the Rusty Miller perpetual trophy (The Rusty) for the low score foursome. Be the next to have your name engraved on the trophy. If the foursome is sponsored by a company, we will engrave the company name with the player’s name. Come and support us in education. Past SPE presidents are invited for our traditional informal past presidents meeting. We are asking for Tee sponsors for this Year’s Tournament. We would like to thank last year’s Tee Sponsors. Many are doing so this year. All of the funds go directly to the Scholarship, High school essays and student admissions to our events. SPE Southern California is also looking for an event sponsor. The tournament will be named after this sponsor. The (ABC Inc.) 35rd Annual Golf Tournament for Plastic Education. A $2000 per year donation with a commitment for 3 years is all that is needed to have the tournament in your company’s name.

The Southern California Society of Plastics Engineers is proud to host
35th Annual Golf Tournament for Plastics Education
Thursday June 21, 2018, 7:30 AM

$5000.00 Prize for Hole-in-One

Our Golfers will enjoy our return to the exclusive Sierra Lavern Country Club. Located in the rolling foothills of the majestic San Gabriel Mountains, the course offers a cool climate surrounded by great natural beauty. We have an early morning shotgun start at 7:30AM with the awards luncheon following the round. Join in after the tournament for the golf awards presentation, raffle and luncheon after golf. Get your name on the Rusty Miller perpetual trophy (The Rusty) for the low score foursome. Be the next to have your name engraved on the trophy. If the foursome is sponsored by a company, we will engrave the company name with the player’s name. Come and support us in education. Past SPE presidents are invited for our traditional informal past presidents meeting. We are asking for Tee sponsors for this Year’s Tournament. We would like to thank last year’s Tee Sponsors. Many are doing so this year. All of the funds go directly to the Scholarship, High school essays and student admissions to our events. SPE Southern California is also looking for an event sponsor. The tournament will be named after this sponsor. The (ABC Inc.) 35rd Annual Golf Tournament for Plastic Education. A $2000 per year donation with a commitment for 3 years is all that is needed to have the tournament in your company’s name.

7:30 AM, June 21 tee time
Shotgun start, Scramble format
Coffee and rolls served at registration
- Tee sponsor: $120 •
- Flag Sponsor: $250 •
- Raffle prizes accepted at the door •
- $115.00 per SPE member, $130 per non member •
Please Call Kerr Kanbara, 909 906 2332 for more details.

Any donations in the form of Raffle Prizes, Tee Sponsorship, Cash or Services for this fundraiser will be greatly appreciated. Your contribution will be recognized at the tournament.

REGISTRATION
Register online at www.socalspe.org. Ashley Spittle, event chair. 714-423-8050.
Sierra Lavern Country Club
6300 Country Club Drive, La Verne, CA • 909 906 2332
Quantity, Quality, and the Myth of Cheap Plastic Parts

Recently, I had a series of conversations with a potential new client. They were developing a new product, and were getting ready to make prototypes. They were evaluating materials and manufacturing processes – not just for prototypes, but also for production. The kicker – the new client was an inventor (actually, a couple of inventors, working together).

As a general rule, I don’t work with inventors. While some have good ideas, most have no clue about what they are getting involved in. These guys were different. Not only did they understand the product development process, they also had a well thought out business plan. They had defined the end-use requirements, and were very clear about the market their product was going to compete in, the needs and expectations of potential users, and the pricing structure of competitive products. They claimed their concept had some competitive advantages, and they were also interested in pursuing the use of sustainable materials, utilizing existing recycling streams with minimal waste and scrap. On top of all that, they weren’t even aware of the criteria that they were making decisions to be made, not just about the product, but strategy and branding, distribution, market penetration, and more. Add to that the issues about the effective use of materials, including supply chain logistics, re-processing and recycling, waste management, and other environmental concerns.

I have been in the design and development business for a long time, and I understand all that. But when someone makes a decision about material selection in a preliminary meeting, I sometimes get a bit . . . frustrated.

“THIS SEEMS LIKE OUR BEST OPTION SO FAR, AS IT GIVES US A REASONABLY CHEAP PART WHILE ALSO MAINTAINING QUALITY.”

It was a simple comment, one that flowed naturally in the conversation. Later, I realized that it hit my hot button. Actually, it hit several of my hot buttons, all at once.

EVALUATING OPTIONS

The first hot button had to do with evaluating options. No doubt, developing a new product is not an easy task. The path to production involves ideas, concepts, prototypes, dead-ends, trial and failure, and also (hopefully) trial and success. And that is just the product. There are also business decisions to be made, not just about the product, but strategy and branding, distribution, market penetration, and more. Add to that the issues about the effective use of materials, including supply chain logistics, re-processing and recycling, waste management, and other environmental concerns.

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“THIS SEEMS LIKE OUR BEST OPTION . . .”

The material being discussed might have been appropriate, but what bothered me was their decision making process. They were making decisions, without sharing the criteria on which those decisions are made. Worse yet, they weren’t even aware of the criteria that they were using – and they had no real data on which to base any of their decisions. How in the world can you determine that any material offers the best option?

MAINTAINING QUALITY

The second hot button had to do with quality. As a small business owner, I understand what they meant. Basically they were saying “We want a quality part at fair price.” They have every right to expect that. As the classic TV commercial might say:

“I AM NOT GOING TO PAY A LOT FOR THIS MUFFLER!”

However, as an engineer and product guy, I take exception to how they described their quality requirements.

The term “quality” has several meanings, and they are often mis-understood and mis-used. In common language, the term quality is used inter-changeably with other terms such as luxury and elegance. And while these terms are often hard to evaluate, they usually imply a sense of superiority.

JAMES, PLEASE BRING THE BENTLEY UP FRONT. THANK YOU.

In the business world, the term quality has a practical definition, involving the concept of “fitness for purpose.”

DOES THIS MATERIAL / PRODUCT / SERVICE / PRACTICE MEET THE REQUIREMENTS?

(Continued on page 9)
On March 7, in the Hall of Champions of the NHRA Museum in Pomona, approximately 40 attendees honored some of our youngest champions. In the Education Night for the Southern California Region of the SPE, scholarships were awarded to three young talented high school students. These students participated in the “Wonders of Plastics” Essay Contest. In this contest students research any area of their choosing where plastics are of benefit to humanity, and then proceed to eloquently provide their conclusion in a concise essay. This year the entrants wrote on topics from food safety, recycling, bioplastics, medical safety, energy savings amongst many other topics. Our awardees were:

The scholarships awarded were $250 for first place, $150 for second place and $100 for third place. Matching funds were also given to their high schools, $400 to Ontario High School and $100 to Diamond Ranch High School.

We would like to thank Prestige Mold, Hi-Tec, Alba Enterprises and Fimmtech for their financial support.

M.R. Mold & Engineering will demonstrate its expertise in building silicone injection molds with tight tolerances, complex geometries and flashless processing capabilities at NPE 2018. Liquid silicone rubber (LSR) moldmaking and molding has become a specialty for the company, which is based in Brea, CA. M.R. Mold & Engineering produces molds for the medical, dental, consumer product and automotive industries.

In partnership with Krauss Maffei, M.R. Mold will run a four-cavity, in-mold slitting duckbill mold featuring a four-drop cold runner system at booth W403. In-mold slitting is part of the mold automation with specific molding machine sequencing.

In Makura USA’s booths—W911 and W103—M.R. Mold will be represented with a four-cavity mold producing a magnification lens from optically clear silicone. A single-drop cold runner system on M.R. Mold’s universal base will feature ejection that presents the part for robotic removal.

Zieger Industries (booth S483) will demonstrate M.R. Mold’s technology with a two-cavity LSR mold for a high-beam automotive application. The exhibit will show how silicone can be molded in applications that thermoplastics are incapable of doing.

“LSR poses challenges that do not exist in the plastics industry,” commented Rick Finnie, President of M.R. Mold. “With 34 years of experience creating solutions to those challenges, we can help companies with their requirements from concept through completion to speed their product to market.”

In M.R. Mold’s own booth (W4391), R.D. Abbott will showcase the latest addition to its technical services portfolio—a Liquid Additive Manufacturing (LAM) 3D printer. The patent-pending LAM 3D printer was developed in collaboration with German RepRap GmbH, a manufacturer of 3D printers, and Dow Performance Silicons. German RepRap’s LAM platform combined with Dow Performance Silicons’ 3D printable Silastic LC 3335 LSR is potentially capable of printing functional prototypes and enabling small manufacturing trials of complex parts. Further, the material properties closely match those of molded LSR, allowing an easy transfer into injection molding processes for high-volume manufacturing.

M.R. Mold & Engineering also designs and builds molds for silicone gumstock, thermoset and thermoplastics materials.

NPE 2018 comes to the Orange County Convention Center in Orlando, FL, from May 7 to 11, 2018.

PRODUCT SPOTLIGHT

M.R. Mold & Engineering to highlight silicone molding expertise at NPE

Wednesday, December 27, 2017

By: Clare Goldsberry, NPE
Injection Molding
Automotive and Mobility, Consumer Products, Materials, Medical


Second Place: Mariana Orozco-Berber– Ontario High School: “Plastic: The Unexpected Hero of the Food Industry”

Third Place: Mauro Lozano– Diamond Ranch High School: “Plastic: Molding an Efficient Tomorrow, Today”

Southern california spe awards winners in ‘wonders of plastics’ essay contest.
1. Make a good GREAT product
First and foremost, focus your efforts on making a truly great product. One that provides value to the end user - and also delights them.

2. Materials and Processes
Materials and manufacturing processes often go hand-in-hand. Sometimes the material is the most important, and the process is secondary. Other times, it goes the other way. As you explore things, keep your eyes and ears – and your options - open.

3. Waste Not, Want Not
In any manufacturing process (as in life), there is always “waste” material. Whether you call it scrap, left over material, prototype runs, whatever - there is always something left over. Yes, the infrastructure to re-process the left overs in the plastics industry is sometimes lacking, but it is getting better. And while changes to the infrastructure are going to be driven by the major players, every little thing matters.

I am reminded of a phrase from a teacher long ago. It’s never too old to learn.

Here endeth the lesson.1

This article originally appeared on the blog site plasticsguy.com, and is reprinted here with the permission of the author, Eric R. Larson.

(1) Jim Malone, as played by Sean Connery in the 1987 movie The Untouchables.