



The SPE Press

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June 2015

SOCIETY OF PLASTICS ENGINEERS

The Southern California Section of the Society of Plastics Engineers
Local information on resources and education available to the plastics profession

Society of Plastics Engineers

33rd Annual Golf Tournament for Plastics Education

Sierra La Verne Country Club

6300 Country Club Dr. La Verne, CA 91750 ph 909-596-2100 sierralavernecc.com

Monday, June 22, 2015

**12:30PM Shotgun Start
(11:00AM check in)
scramble format**



The Southern California Society of Plastics Engineers is proud to host its **33rd Annual Golf Tournament for Plastics Education.**



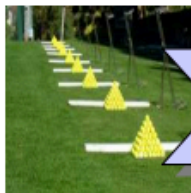
Golfers will enjoy our return to the exclusive Sierra Lavern Country Club. Located in the rolling foothills of the majestic San Gabriel Mountains the course offers a cool climate surrounded by great natural beauty.

Event proceeds help support the SoCal SPE education and scholarship programs.

Join in after the tournament for the golf awards presentation and dinner (6:00PM)

SPE will also formally present the George Epstein Scholarship <http://socalspe.org/Scholarships.html>

Past presidents are invited for our traditional informal past presidents meeting



REGISTER ONLINE www.socalspe.org

- *Low Team
- *Low Gross
- *Longest Drive
- *Closest to Pin



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.

Note: If paying by credit card you can also register online at www.socalspe.org

Pricing	\$ SPE member / \$ non-member	Name of Participants (group contact as #1)	Index (if used)
<input type="checkbox"/>	GOLF & CART-DINNER \$120/\$140.00 ea	_____	_____
<input type="checkbox"/>	GOLF & CART only 85.00/\$95.00 ea	1- _____	_____
<input type="checkbox"/>	DINNERBANQUET only \$45.00/\$55.00 ea	2- _____	_____
<input type="checkbox"/>	SPONSOR tee\$100.00 / flag\$250.00 Sponsor - Sign at Tee \$100 or Company Pin Flag \$250	3- _____	_____
<input type="checkbox"/>	EDUCATION/SCHOLARSHIP donation \$ _____	4- _____	_____
<input type="checkbox"/>	I plan to donate a raffle prize or other services	_____	_____

TOTAL _____

Event coordinators:

Kerry Kanbara 909-906-2332

Rick Hays 714-473-9598

Em: kerry@piustech.com



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Fax 909-625-2847 (NO REFUNDS FOR CANCELLATION AFTER 06/01/15)

President's Message

Last month's dinner meeting was very informative not only for those that did not attend NPE, but also for those that did attend. The NPE show was so large this year that it would have been difficult for anyone to see everything. Thank you Vishu, great job.

I like to think that Southern California SPE section is here for everyone involved in Thermoplastics. We want to be both informative, educational, and a forum for networking. After a lot of work and thought we have made changes to our newsletter which is now electronic. This allows us to reach more people involved with plastic. The newsletter is a way to deliver information, education and networking. The best way for you to take advantage of networking with our newsletter is to purchase an ad space or a business card space. Please contact Kerry Kanbara who is listed on the Website and the newsletter. Please share the newsletter with your colleagues. They can contact Kerry Kanbara to become recipients of the 10 month newsletter.

Our website has been modified as well, ([SocalSPE.org](http://socalspe.org), <http://socalspe.org/>) and is also a way for us to deliver information and a way to network within the industry. Lastly, we have monthly meetings ranging from dinner with guest speaker, and Plant Tours, to Work Shops. These events are the best way for all involved with plastics to stay informed and to network. We post all of the upcoming events on our SoCal website ([Socalspe.org](http://socalspe.org), <http://socalspe.org/>) and in our newsletters. In order to register for the

upcoming events, you can easily do this on our [SocalSPE.org](http://socalspe.org) <<http://socalspe.org/>> website.

This month we will have our 33rd Annual Golf Tournament for Plastics Education at Sierra La Verne Country Club. We hope to see you all there.



If you are reading this and have ever considered getting more involved, the first step is to become a SPE member. You can do this by going to our website and scrolling to the bottom.

You will see: JOIN SPE. By becoming a member of SPE, you become a part of the world's most expanded society for plastic professionals. With people connections in 84 countries around the world and a contact database over 15,000 members. That's just the beginning....

To learn more about SPE member benefits visit SPE's national website at www.4spe.org <<http://www.4spe.org/>>

Ashley Price is our Membership Chairperson and is listed on the news letters. If your membership has lapsed and you have questions, please contact Ashley for any assistance. If your membership is current and you want to be more involved, consider joining the Southern California SPE board. If this interest you, please contact me or any of the board members.

Rick Hays
Senior Account Manager
Thermoplastic Industry Manager
Advanced Materials Group

Moisture Control Helps Ensure Part Quality and Uniformity by Tuan Dao

Many molding resins collect moisture from the air. Such plastics are called hygroscopic. A good example is nylon. If regrind is used, it should be emphasized that the fine particles and rough surface of regrind collect moisture from the air even faster than virgin resin. For hygroscopic materials, the only practical means of handling during molding operation is to dry the virgin resin and regrind before use.



moisture with dry air, the moisture is removed by a vacuum. This is a fast method of drying with little or no darkening of the resin, because of the vacuum, the resin is not actually in contact with hot air. Vacuum drying equipment is more expensive than dehumidifier air dryers.

Therefore, unless the color of the resin is extremely important, the added expense of vacuum equipment may not be warranted.

A. Method of Drying

There are three practical methods for drying hygroscopic resin. These are:

1. Heat the resin above the boiling point of water. This method is not recommended for drying nylon because the high temperature air in contact with the resin will oxidize it and cause it to darken.
2. Heat the resin to a lower temperature and sweep away the resulting moisture with very dry air. This is how dehumidifier ovens work. Dehumidifier hopper dryers use the same principle but the resin is in the hopper for only a short time. Thus, hopper dryers mounted on the machine should be considered for keeping the nylon resin dry, but for not actually drying it. Remember that a hot air oven without a dehumidifier will not dry nylon. The air being used must be very dry.
3. Heat the resin above the boiling point of water, but instead of sweeping away the

B. When Is Drying Necessary?

Some resins – like acetal resin for example – absorb very little water from the air. About the only moisture problem with acetal that could arise would be if a container of resin is brought from a cold warehouse and opened in normal room temperature. If this resin were fed immediately to the machine, water condensing on the surface of the resin could cause some splay. Even in such a case, if the resin stands in the warm hopper over the machine, the water will evaporate.

Nylon, on the other hand, absorbs moisture rapidly. The amount collected from the air depends on room humidity and the type of nylon. Nylon 612 for example, picks up much less water than nylon 66. Both resins must contain less than 0.2% moisture to avoid molding problems and loss of part toughness.

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Nylon resin loses toughness if it is wet when molded. Thus, care must be taken to protect the regrind. Drying is necessary if regrind is exposed for more than one hour at a relative humidity over 50%. The sooner the drying is done after exposure, the easier it will be.

This is because the moisture is still on the outer surface of the resin, not inside.

Moisture on or near the surface can be removed quickly. If the regrind is allowed to stand for several hours, however, it may take 10 times longer to remove the moisture as it took to absorb it.

C. Checklist for Effective Drying

1. Clean drying equipment. Remove any dust by vacuum cleaner.
2. Be sure dehumidifier is operating and

recharging properly. Check dryness indicator if your dryer is so equipped or use a dew-point meter.

3. Prevent leakage in gaskets or hoses that return air to dehumidifier tanks. Outside air drawn in will slow drying rate.
4. Make sure that heaters bring dryer to set temperature quickly after loading, because drying is related to resin heating speed.
5. Try to avoid drying different resins in the unit at the same time. Drying air will pick up dust of one resin and contaminate the other.
6. Seal dried regrind in airtight cans or drums if it can't be used promptly. If fiber drums are used, they should have polyethylene bag liners.

So Cal People Watch



This is a new feature for our newsletter. We will note changes of positions, opening of new companies, interesting facts about our plastics community and humorous stories told in good taste about our members. Please forward all of your gossip to me, Kerry Kanbara, kerry.kanbara@gmail.com

Bobby Macias: Bobby, the son of Robert Macias, owner of MacFam Plastics has started an enterprise which provides material and systems for additive manufacturing (3D printing). Bobby Macias, a partner at a 3D Printing retail startup by the name of Makersome.com, said, "We are seeing businesses starting to buy what would normally be considered consumer grade 3D printers and using them to supplement and supercharge their rapid prototyping efforts". Consumer and Prosumer grade 3D printers start at under \$1,000.00 and go up from there depending on print materials and options, "Companies are able to reap lightning fast ROI's from using such machines because they can pay for themselves in only a few prints and exponentially speed up the rapid prototyping process with very little investment" according to Bobby. Consumer and Prosumer 3D Printers print quality has advanced so much, that many of Makersome.com's customers have been able to use their 3D models as production quality parts.

Bobby Macias: Makersome.Com

April Dinner Meeting NPE/ANTEC Recap



ANTEC® 2015

The April Evening Technical meeting was held on Thursday April 16th, 2015 at Jagerhaus Restaurant in Anaheim. The topic “NPE-ANTEC RECAP” was presented by Vishu Shah of Consultek Consulting Group. The topic attracted over 15 people from the industry.

The speaker presented all the latest and the greatest technologies and innovations represented at this year’s NPE and ANTEC. The topics included new developments in machinery, materials, tooling technologies, design, rapid prototyping, auxiliary equipment, and more. The presentation included short video clips describing the new technologies and innovations as well as

samples and other related materials.

Attendees learned about Arburg Free Former a new development in 3D printing, RocTool Rapid heat/cool Process, the latest developments in Mucell technology, Plastic (Thermoset) tooling for RP, In-Mold assembly, Robotics, Multi-shot Multi-Material etc. New developments in materials included new family of thermoplastic elastomers, carbon reinforced ABS used in 3d printing an actual working car, Nylon composite brake pedal made from thermoplastic continuous-fiber sheet, and injection molded LSR iPhone case with nine different colors and hardness, conductive carbon nanotube materials.

Online Buyers Guide & Directory

A resource for Southern California's Plastic Manufacturers

Don't forget to add a shortcut on your desktop to the SoCal Buyer's Guide

www.plasticmfg.socalspe.org



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Western Plastics



TRADE FAIR

Anaheim, CA

AUGUST 13, 2015

Hosted by The Southern California
Society of Plastics Engineers



The **Western Plastics Trade Fair** is the processors choice for networking with local suppliers.

We hope you will join us and your fellow colleagues on AUGUST 13, 2015. See you at the Fair!

Objectives

- Networking - Bring local Plastics Processors together
- Enhance a local vendor to processor supply chain
- Effectively introduce new products and services to the Plastics Processor
 - Bring awareness to Plastics related educational courses in Southern California
 - SPE based seminars - The latest in productivity improvement technology

Seminars

Renowned speakers and educators who specialize in the plastics industry

1:00-4:00PM

- Seminar 1: **TBA**
Speaker: **TBA**
- Seminar 2: **TBA**
Speaker: **TBA**
- Seminar 3: **TBA**
Speaker: **TBA**

Exhibits

4:00-7:30PM

Local suppliers and resources for the Plastics Industry

- Additive and color suppliers
- Auxiliary equipment suppliers
- Secondary services
- Educational materials
- Overseas markets
- Rapid prototype suppliers
- Insurance services
- and MORE
- Material suppliers
- Machinery manufactures
- Job locating/placement services
- Molding supplies
- Software programs
- Educational services - colleges
- Finance and banking resources

Dinner

5:30-7:00PM

- Buffet dinner in the exhibit hall
- Network with colleagues during the dinner



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Continued on page 7

Western Plastics Trade Fair

Continued from page 6

Raffle Prizes

- Proceeds support our local SPE Scholarship and Plastics Training Programs

Location

The Phoenix Club [click here](#)

1340 S. Sanderson Ave. Anaheim, CA

The Phoenix Club, one of the largest venues in Orange County, encompasses 6.2 acres of banquet halls, festival grounds, patio gardens and two restaurants. Inspired by German heritage and tradition to create a European charm has made it one of the most popular places in the region.

Exit Ball Road off the 57 freeway and head east. Right on Phoenix Club Drive. Right on Sanderson Ave.

Registration [click here](#) for online registration

INCLUDES: Seminars, Trade Fair Exhibit Hall and Dinner

Advanced purchase non member \$ 40.00 per person

Advanced purchase SPE member \$ 30.00 per person

\$ 50.00 day of event register at door

Event PDF [click here](#) includes mail/fax registration form

Schedule

If attending seminars check-in is 1:00PM, Trade Fair opens at 4:00PM

1:15PM to 2:00PM **"Seminar 1"**

2:15PM to 3:00PM **"Seminar 2"**

3:15PM to 4:00PM **"Seminar 3"**

4:00PM to 7:30PM **Trade Fair - Meet your local suppliers and see what's new in the industry!**

5:30PM to 7:30PM **Dinner - Buffet dinner in the exhibit hall**



For more information contact:
Vishu Shah, Consultek
909-465-6699

*This event is hosted by
the Society of Plastic
Engineers, Southern
California section*



PLASTIC ENGINEERING – PART DESIGN FOR INJECTION MOLDING

(Course Code AMES-40168, section 109748)

University of California – San Diego, Extension.
July 11 – August 8, 2015



Expanding Skills in Plastic Part Design for Injection Molding

Plastics have increased their penetration of engineering applications that push the limits of part design, molding techniques and processing ranges. Plastic parts, often complex and large, are calling for better quality control and dimensional tolerances. Resin families and compositional variations have proliferated. Growth in the plastics industry has led to a constant influx of new people from other technologies who need to begin developing skills in the field of engineering plastics. People working in the industry need a good working knowledge of plastic part design.

Who Should Attend?

The course is primarily for designers, engineers, and technicians directly involved with making parts out of plastics. However, those in related activities ranging from management, purchasing, and quality control can benefit from the course by developing a better appreciation and understanding of the process of designing a plastic product.

Course Content

- Process of product design
- Fundamentals of plastics. Strength of materials, non linear considerations
- Materials selection in product design
- Molding and tooling considerations in part design
- General principles of part design. Short term loads, long term stress exposure
- Creep and relaxation in part design. Understanding safety factors in design.
- Dimensional analysis in part design
- Assembly techniques: design of snap-fit, press-fit, fasteners, ultrasonic, vibration welding, heat staking, adhesive bonding.
- Prototyping

Time/Dates: Saturdays, 9:00 AM-3:00 PM, July 11 – August 8, 2015 (5 mtgs)

Location: UC San Diego Extension. University City Center.

Instructor: Tuan Dao, MSME. Consultant, Polymer Engineering Group, Inc.. Formerly with DuPont Co., Engineering Polymers, has 30+ years experience in part design, mold design and molding techniques.

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Play Golf
June 22, 2015
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