

Mold Technologies Division



Division of Society of Plastics Engineers

Volume 38, Issue 4, June 2017

Message from the Chair

This is my last Message as your Division Chair, and I'd like to thank the entire Board for the accomplishments that have been made:

- Building on the foundation of the previous Board, we've added new Directors who bring new perspectives and energy for the next chapter of our Division and our industry.
- We changed the Division name to be further inclusive to those who buy molds, sell molds, maintain molds, and have a role within related technologies such as hot runner systems and additive manufacturing, as well as those who build and design molds.
- We updated our Division Mission Statement to reflect our focus on delivering technical updates through presentations and Tech Tours, and supporting the next generation of mold professionals through our newly revived and restructured Grant Program.
- We rolled up our sleeves and updated our Bylaws, and in receiving the SPE Silver Pinnacle Award we are now positioned and motivated to achieve Gold Pinnacle status in 2018.



Glenn Starkey

SPE Mold Technologies Division Chair

Please review the pages that follow, and when you view the Board's Org Chart, consider if a position in our Division might be for you ahead. See our Conferences and Tech Tours, and consider if you could be a speaker or know of a colleague who would be a fit. See our sponsorships, and perhaps your company or a supplier of yours could be added.

While our Division is on solid footing, we'll need new sponsors, speakers, and Directors ahead, to further our Mission and continue to have a positive impact on our industry. Contact any of us on the Board, and together, let's keep this moving forward!

A handwritten signature in black ink, likely of Glenn Starkey.



A Message from the Newsletter Editor

Increasing interest by OEMs in what 3D printing, both polymer processes (SLA, FDM, etc.) and metal printing processes (SLM, DMLM, DMLS, etc.), can do for their bottom line is driving these global companies – particularly in the aerospace and automotive segments with the medical market not far behind – to adopt 3D printing for product development and end-use parts.

When Stratasys announced at the RAPID show in May its Continuous Build 3D Demonstrator system, it was promoted as a system that could print multiple parts at a time from multiple 3D printers using the Fused Deposition Modeling (FDM) technology. Connected in the Cloud, 3D printers in multiple locations can print the same part thus gaining capacity without having to buy more machines. A typical system could have 12 printers, four across and stacked three high, all in part production.

Stratasys chose three partners to help them try out the Continuous Build 3D Demonstrator system. One of those, In'Tech Industries, Inc. in Ramsay, MN, is a supplier of rapid prototyping/AM, engineering services, tooling services and injection molding. Looking at In'Tech's web site it's obvious that the company is one the leading edge of what is possible with 3D technology.

According to Stratasys' press release the automated workflow of the Stratasys Continuous Build 3D Demonstrator "enabled In'Tech to offer same-day or next-day delivery of quantities of identical or mixed parts that would eventually be injection molded, helping the company dramatically improve customer service without adding additional staff. In'Tech currently has nine machines that can produce 50-100 parts a day.

It would appear that there's plenty of room for mold makers to include some 3D printing technology in their business model. Product development is a good place to start. By 3D printing various iterations of a component, a mold maker could quickly provide samples to the customer's engineering team for evaluation without having to build a single cavity pilot mold. For incorporating metal 3D printing, there are hybrid CNC machining centers that offer both subtractive and additive technology to help overcome the challenges of complex geometry in molds.

Yes, 3D printing technology is a "disruptive" technology for mold makers, but I've long thought there is a place for it in the business of mold making. Many OEMs are already cutting the mold maker out of the front-end product development process by buying 3D printers for their engineering departments. That means mold makers will miss out on a great opportunity to do truly value-add work that could be profitable.

I would encourage mold shops to take a look at 3D and what it can do for your business and how it can make your company more valuable to your customers.



Clare Goldsberry

SPE Mold Technologies Division
2016/2017 Newsletter Editor

Clare Goldsberry, Editor

Amerimold Roundup, Industry Recognition

The Amerimold trade show held in Rosemont, IL, on June 14-15 was an opportunity for the SPE Mold Technologies Division to showcase our organization.

Rich Martin, Business Development Manager for JMMS, a mold manufacturer in Easley, SC, is our Divisions Marketing Chair, and reports that we had a good group of people visit the SPE MTD booth during the two-day event. "It was a cross-section of individuals from a shop owner to a designer and everyone in between," said Rich. "Some were members, some were not. Those who are non members were curious about us and I feel we did a

good job in educating them."

A drawing was held for an SPE MTD magnifier, for viewing details and mold texturing when in the field, and many attendees entered to win. "It was great to be able to represent and promote our Division," Rich said.

In addition, each year the SPE Mold Technologies Division recognizes two individuals for their contributions to our industry.

This year's Mold Designer of the Year Award (sponsored by Progressive Components) went to Renee Nehls of Sussex IM, pictured below receiving the award at Amerimold. The Mold Maker of the Year Award (spon-

sored by DME Company) went to Andy Baker, of Byrne Tool + Design, pictured below.



Congrats to both, and in our next issue we'll feature their bios, along with info for our members to nominate a colleague that may also be deserving of recognition.



At the SPE MTD booth at Amerimold, the SPE MTD Mold Designer of the Year Award for 2017 went to Renee Nehls. Photo courtesy of Creative Technology.

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Tech Tours: SPE MTD and AMBA Collaboration

The SPE Mold Technologies Division and the American Mold Builders Association sponsored a joint plant tour of A-1 Tool Corporation, Melrose Park, IL., this past March. The event drew eight sponsors and 75 attendees came from three states.

The Tech Tour raised \$1700

that will be used to purchase a desktop CNC machine for use at various career fairs and high school events to showcase CNC machining and to attract potential students to our industry.

Many helped make this a success, but a special thanks goes out to the AMBA's Karen Nor-

ville, SPE MTD's Greg Osborne of Synventive Molding Solutions, and Geoff Luther of A-1 Tool Corporation.

With this first event being a success, our Division looks to coordinate another Tech Tour in the 2017/2018 year ahead!



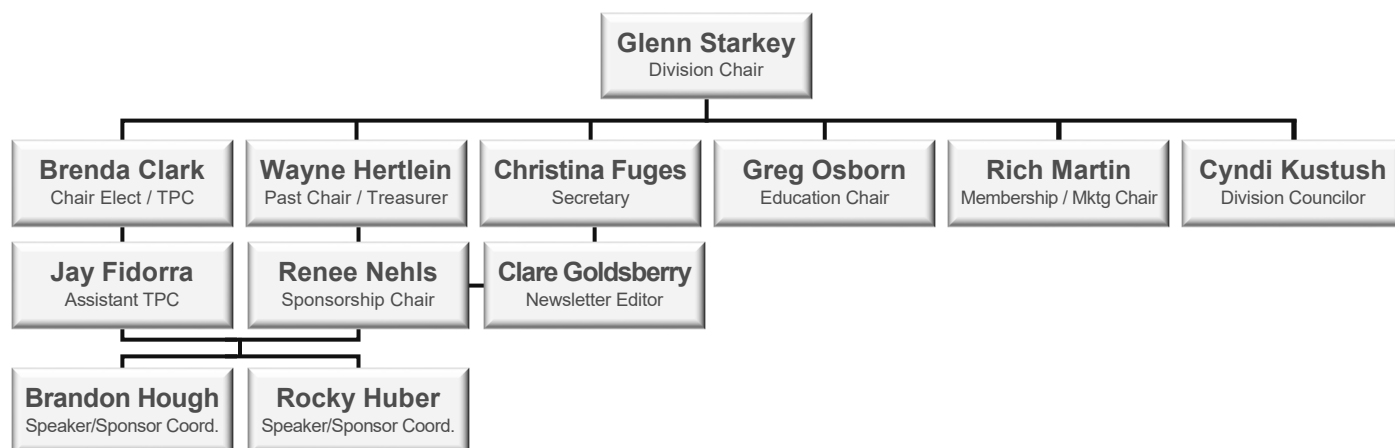
Featured above left is a Geoff Luther of A-1 Tool Corporation addressing the attendees at the Tech Tour; and at right is Greg Osborne, Education Chair for the SPE Mold Technologies Division.





MOLD TECHNOLOGIES DIVISION

2016/2017 BOARD OF DIRECTORS



OUR MISSION

"To be the leading industry resource for technical information to advance plastic mold engineering technologies, while fostering industry growth, education and leadership."

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SPE MTD Donation for Milwaukee Students

April 18th marked the Annual SPE Milwaukee Education Night, and the SPE Mold Technologies Division Night, and our MTD Division's Renee Nehls presented three students each with a \$250 grant. All of the students are enrolled at Waukesha County Technical College's Tool/Die Moldmaking Program.

Pictured (left to right): Robert Novak, Associate Dean of the School of Applied Technologies (WCTC); Michael Comerford, Sebastian Moore, Joshua Peper, and Renee Nehls, Tooling Engineer at SussexIM.

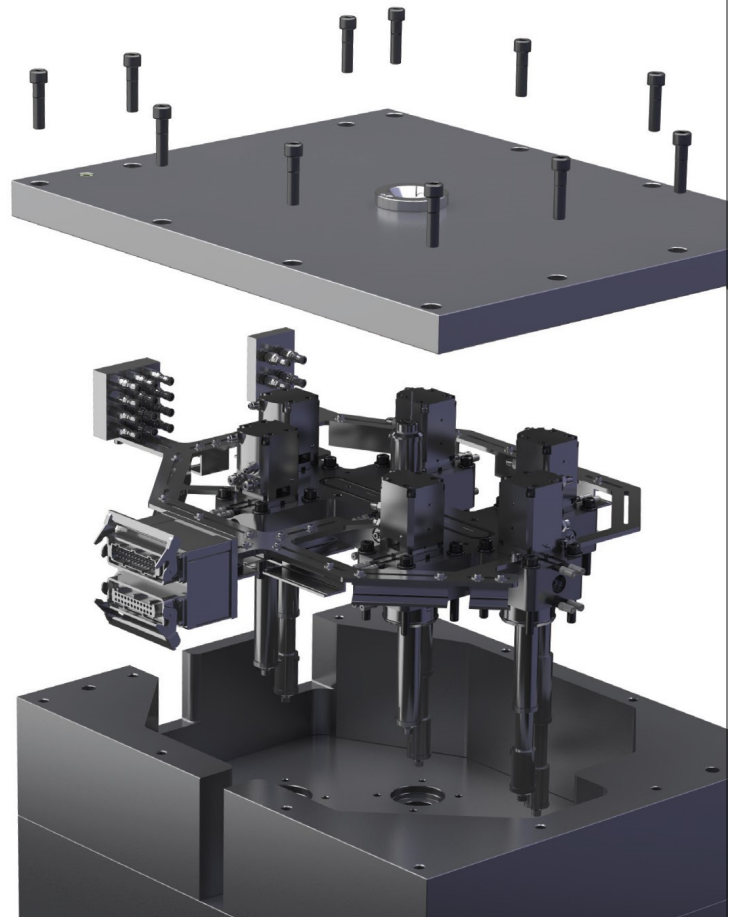


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SPE Announces New Collaboration Program

Leveraging a long association with universities and a large number of plastics industry professionals, SPE has created an Industry Academia Collaboration (IAC). The program's goal is to promote a mutually beneficial collaboration between industry and academia by facilitating research and development projects relating to plastic materials, processes, products and technologies.

Many companies are now unable to find enough technically competent employees to research new material, or to develop new machinery, products and

emerging markets. Many universities have the technical expertise to undertake research or develop projects of this type on a contract basis. These need not be large-ticket, multi-year projects. Small projects will be treated with equal respect.

SPE's Industry Academia Committee members will review project requests and put the applicant in contact with universities equipped and staffed to handle that type of project.

For more information visit 4spe.org or contact IAC Chairman Dr. David Bigio at dbigio@umd.edu.



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SPE Mold Technologies Division

May 9, 2017 Meeting Minutes

To: Board of Directors Mold Technologies Division SPE

From: Christina Fuges – Secretary to the Board

Subject: Minutes of the Meeting of the Board of Directors 9-May 2017

	Present	Absent		Present	Absent
Glenn Starkey, Chair	X		Renee Nehls	X	
Brenda Clark	X		Clare Goldsberry	X	
Wayne Hertlein	X		Jay Fidorra	X	
Christina Fuges	X		Rocky Huber	X	
Greg Osborn	X		Brandon Hough	X	
Cyndi Kustush	X		Richard Martin		X
Kathy Schacht	X				

11:40 EST meeting called to order

Division Chair Report – Glenn Starkey

- Opening Comments: Positive ANTEC. Great job Brenda on conference and linking up with Injection Molding Division. Glenn's last ANTEC as chair, as the year ends June 30th.
- Board Member Roles: Last year we added new board members, and these directors ensured our compliance with our bylaws. Brenda thanked Glenn for growing the Board.
- Division Bylaws: Earlier in the year we used the SPE template, crossed referenced these with our most recent bylaws, and there were very minor changes. Renee did a final look since our last Board meeting for typos, clarity, etc. Brenda made motion to approve the bylaws revision distributed within this meeting's invite, and Wayne seconded. All in favor. Bylaws are now in effect.

Chair Elect Report – Brenda Clark

- Nominations/Elections: Timing for 2017/2018. Next step is the election. If you have further thoughts re-

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garding your role, please let Brenda know. Glenn to send out election ballot through SPE.

- Division Goals: Our Board is proud to announce that we have received the SPE Silver Pinnacle Award at ANTEC. The Award keeps a Division on track, and next year we aspire to achieving gold.
- MoldMaker/Mold Designer of the Year status: Awarding these at Amerimold in June. Only two submissions so far. Wayne needs to verify forms. It was promoted in newsletter and on the cover note of the e-mail. If we each keep this in mind, we can come up with someone with a distinguished career and the element of giving back to the industry. Wayne sending past winners to Christina, and also will forward that list to Clare to list past winners also in the newsletter.

Division Secretary Report – Christina Fuges

- Minutes from 17MAR2017 were approved.

Treasurer's Report – Wayne Hertlein

- \$28,368.28 in checking account
- Investment accounts: \$89,4540.66
- SPE MTD Total: \$117,818.94
- ITQ Foundation Total: \$40,407.90
- SPE MTD net worth: \$158,226.84
- \$1,283.50 for Division from the rebates
- Send Wayne any expense reports from ANTEC

Mini Tech Report / TPC Report – Brenda Clark (Jay, Brandon, Rocky, Renee & Rich)

- TPC/ANTEC 2017 (May 10) Report: Excellent sessions, with a packed room. ANTEC papers will be posted on the SPE website soon.
- Glenn moderated two sessions. Glenn notes that we need to keep technical sales contacts in mind as future speakers because they are dynamic and can speak on new technology. For example, Wittman Battenfeld keynote (Industry 4.0) was their national sales manager and did a great job.

- Greg and Glenn will discuss next technical tour at AMBA Conference.
- Greg noted that we raised \$1,700 from A1 Tech Tour/AMBA Chicago Chapter to purchase a desktop CNC to show at career fairs. Greg will send a photo and writeup to Clare and MMT.

Division Councilor Report – Cyndi Kustush

- First face-to-face meeting. They have three on-location meetings a year. This was training for new councilors.
 - Covered history of organization, key contact people, overview of financial status.
 - Basically, learned that councilors are the governing body under the executive committee. We represent divisions, so we bring questions to the executive committee.
- Trying to grow divisions worldwide. 50 active sections, 25 active division with 80% in North America and the rest split between Europe and Asia.
- Special interest groups such as 3D printing
- Mission is to provide technical content. We should partner with other sections (injection molding).
- They are also conducting focus groups for member generation, member retention, etc.
- Comprehensive report will be compiled by Cyndi and distributed to the Board.
- Kathy Schacht explains Plastivan, is a traveling classroom that goes to middle and high schools to each about plastics. Used to be an actual van. We have three teachers and looking to hire two more. It is taking off.
- The PlastiVan™ Program is a great way to WOW and excite young people about the science and the vast opportunities the plastics industry has to offer. The PlastiVan™ program travels to schools and companies throughout



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- For more information about the Plasti-Van™ Program, contact Eve Vitale at evitale@4spe.org or +1 810.814.6412.
- Plastivan is looking to raise \$75,000 to help educate what SPE does. SPE MTD should donate some money, and possibly add tooling to the curriculum (a mold unit die, MoldMaking Matters video, etc.). Brenda and Wayne will speak with Eve.

Membership Chair – Rich Martin

- December 2016 through May 2017: started year out at 573, fluctuated to 564 and now at 548. Rich is working on a letter to email blast to drive membership and also suggested that new members get a welcome letter.
- Wayne notes that Kathy says SPE MTD is the 9th largest division.

Sponsorship Chair Report – Renee Nehls

- Renewals are underway, and Synventive and Hasco are in. Renee is working on DME. Renee will contact Doug Hugo at DME (cell: 586 243 2683; doug_hugo@milacron.com) regarding sponsorship for DME, Mold-Masters and Manner.
- Contact Renee with any leads (our newsletter has the format and specifications for ads).

Newsletter Editor Report – Clare Goldsberry

- Last week our newsletter went out.
- Remaining issue 2016-2017
- Post ANTEC (In May); Send Clare report on ANTEC speakers/presentations. Brenda will send and between Jay, Brenda and Glenn they have a lot of photos.
- In June: Send Clare info Amerimold
- Deadline for material to Clare is July 1st..

Awards Chair Report – Wayne Hertlein

- Forward Wayne any more nominations and he'll send out what he has for us to review.
- 5X7 wood/acrylic awards with SPE stickers were perfect.

Education Chair Report – Greg Osborn

- No more grant requests. Greg is working on the following three:
 1. Penn State, dust collector, 3D probe and CNC bits
 2. Alexandria Tech in Alexandria Minnesota, vacuum work holding of their CNC machine
 3. Dunwoody College, (got one last year) looking to purchase a thermoform machine (more than \$2,500). Greg suggests approving the grant through 2017, if they can raise the other funds by the end of the year or deny them altogether. Greg will contact the Thermoforming Division, so he can pass this request onto them. Wayne suggests if Thermoforming takes Dunwoody maybe SPE MTD provides tooling for the machine.
- Brenda reached out to Clemson's general engineering department and other universities in the Southeast.
- Connect Greg with any contacts. Don't forget the community college level. And remember we have \$2500 in reserve for something that comes up



after the three \$2500 grants are distributed.

- Renee says at Milwaukee SPE Education Night 2017, they handed out more than \$3000. \$750 was from MTD and that went to three students in the tool and die program at WCTC. Renee sent a photo to Clare about this for the next newsletter.

Division Marketing – Rich Martin/Glenn Starkey

- Amerimold update: we have 10 x 10 Booth # 600. Brenda, Brandon, Wayne, Rich will be there. Brenda will connect with Rich on booth staffing.
- Brenda also suggests an SPE plaque that can be placed at member booths, which should be part of our standard trade show package.
- Progressive's Rob Federico has SPE MTD giveaways for Amerimold.
- Glenn suggested doing a "throw your business card in and get a magnifier" to promote SPE MTD, this was well received.

- Use booth as a photo opp for SPE MTD Moldmaker and Mold Designer of the Year announcement.
- Board thanked Glenn/Jackie for the SPE shirts and magnifiers. Note: If size is not a fit, let Jackie know and send back.

New Business

- Brenda made a motion to approve grants to Penn State and Alexandria, Wayne seconded. All in favor.

Next Meeting:

Tentative: June 8th or June 22nd

Motion to adjourn the meeting at 12:58pm EST.
Seconded by Jay. All in favor.

Respectfully submitted,
Christina Fuges, Secretary to the Board



"Individual commitment to a group effort—that is what makes a team work, a company work, a society work, a civilization work."

Vince Lombardi

Want to help this team, this trade group society, continue to progress?
Interested in sharing knowledge by giving a technical presentation to your peers?
Contact incoming Chair Brenda Clark, at BClark@hasco.com,
to discuss being a part of our team!

Progressive Components Named One of Plastics News' Best Places to work

Industrial supplier Progressive Components, based in Wauconda, IL, was recently named one of 12 "Best Places to Work" by Crain Communications publication, Plastics News at their annual Executive Forum. Progressive ranked in the first runner-up spot among the 12 finalists.

Plastics News' "Best Places to Work" award is a survey driven competition designed to identify which participants are the best employers in the North American plastics industry. Managed by Best Companies Group

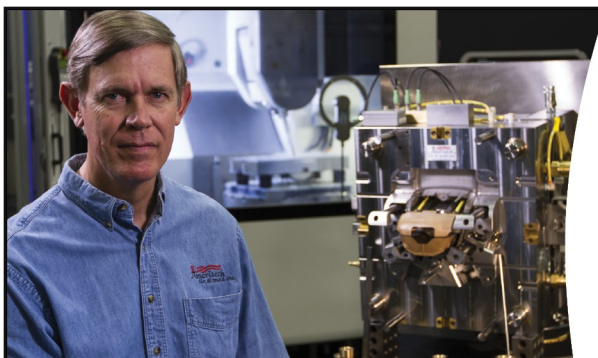
(BCG), an independent research firm that specializes in identifying and recognizing great places to work, the assessment process includes two separate and very detailed surveys focused on Employer Benefits and Policies and Employee Engagement and Satisfaction respectively.

"We are proud to have received this recognition on behalf of all our team for everyone's work on creating a positive and engaged culture," stated Don Starkey, co-owner and chairman of Progressive Components.



Congratulations to one of our longtime SPE MTD sponsors, Progressive Components!

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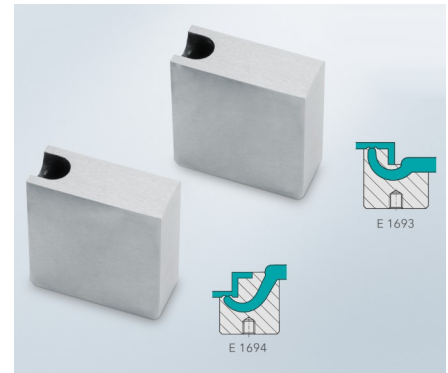


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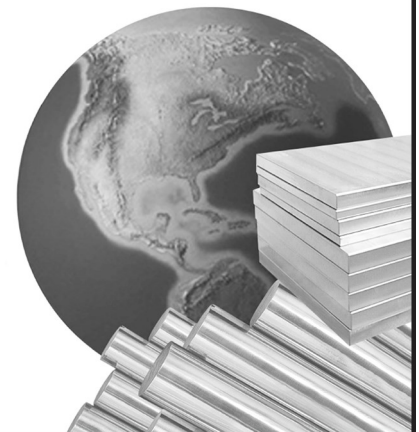
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Makino Shortens Machining Cycle Times While Maintaining Precise Surface Finishes

Makino, a global leader in advanced CNC machining centers, announced the introduction of SGL.5, its latest version of Super Geometric Intelligence software for high-feed-rates, tight-tolerance machining of complex three-dimensional contoured shapes.

"SGL .5 is the next generation Makino advancement, culminating a decade of leadership in high-speed, high-accuracy motion control in complex 3D contouring applications," said Bill Howard, vertical machining product manager at Makino. "Continuous product development and technology innovations and advancements in Makino proprietary software and motion controls/servo technology have altered the traditional speeds and feeds typically used to manufacture these types of parts."

The technology facilitates previously unachievable levels of accuracy and unprecedented reductions in cycle time, said Makino's information. Depending upon the specific geometry of the application, SGL.5 can provide 20-60% faster cycle

times while maintaining accuracy and surface finishes. The result is unmatched speed, high feeds and tight accuracies when executing NC programs with micro-blocks whose traverse movement value is 1 mm or less. This is characteristic of the complex 3D free, curved surface shapes found in the die/mold, medical, aerospace and other high-performance milling applications.

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The SPE Mold Technologies Division Newsletter is now issued four times a year, with readership composed of individuals involved in all aspects of the mold making industry. These issues are made possible through the support of sponsors shown in this Newsletter. SPE Mold Technologies Division thanks these sponsors for their generosity and encouragement in the publishing of our Newsletter.

For information on sponsorship of future issues, please contact:

Clare Goldsberry, Newsletter Editor | Renee Nehls, Sponsorship Chair
602-996-6499 | clarewrite@aol.com | 262-820-2112 | rnehls@sussexim.com

Publication Release Dates

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Summer Issue
June 2018

SPONSORSHIP INFO 2017-2018

Platinum (\$2500/year)

Ad Specs: 9.75" H x 7.25" W

- Full page color ad in quarterly newsletter for one year circulated to members and distributed at SPE MTD events
- First right of refusal to a tabletop at Technical Tours to educate participants on new technologies/strategies
- Opportunity to submit a technical article for publication in newsletter
- Company logo on signage in MTD booth at AmeriMold
- Company logo on signage at ANTEC
- Company logo displayed at SPE events

Gold (\$1250/year)

Ad Specs: 4.75" H x 7.25" W

- Half page color ad in quarterly newsletter for one year circulated to members and distributed at SPE MTD events
- First right of refusal to a tabletop at Technical Tours to educate participants on new technologies/strategies
- Opportunity to submit a technical article for publication in newsletter
- Company logo on signage in MTD booth at AmeriMold
- Company logo on signage at ANTEC
- Company logo displayed at SPE events

Silver (\$625/year)

Ad Specs: 4.75" H x 3.5" W

- Quarter page color ad in quarterly newsletter for one year circulated to members and distributed at SPE MTD events
- First right of refusal to a tabletop at Technical Tours to educate participants on new technologies/strategies
- Opportunity to submit a technical article for publication in newsletter
- Company logo displayed at SPE events

Bronze (\$250/year)

Ad Specs: 2" H x 3.5" W

- Business card size ad in quarterly newsletter for one year circulated to members and distributed at SPE MTD events
- Company logo displayed at SPE events