



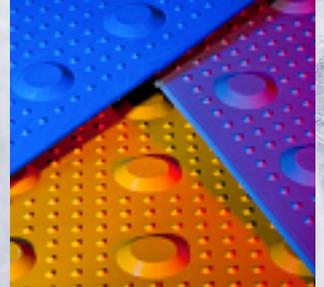
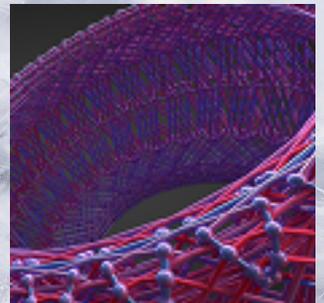
# THERMO SETTINGS

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EVENTS

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- LETTER FROM THE CHAIR, LEN NUNNERY
- TOPCON CLEVELAND RECAP
- TECHNICAL TOPIC
- IDI COMPOSITES
- INDUSTRY NEWS

*Edited by gv marketing & experiences*





**Len Nunnery,**  
**SPE Thermoset Division Chair**

## **2017 PHOENIX TOPCON CALL FOR PAPERS!**

Join the SPE Thermoset Division in Phoenix March 21 -22, 2017 at the Scottsdale Resort at McCormick Ranch. Register now for attendance or sponsorship and receive 10% off until August 15. Technical papers are currently being accepted until October 1, 2016. [shelane@gvineme.com](mailto:shelane@gvineme.com)



## **LETTER FROM THE CHAIR**

Dear Readers,

Thank you once more to all of the sponsors and attendees who supported our most recent Topical Conference (TOPCON) in Cleveland. Without you, it would not have been one of the most successful gatherings in recent history. The SPE Thermoset TOPCON is an annual gathering of industry professionals and students.

Common to all in attendance is an interest in thermosets/thermosetting technology. Beyond this common thread, the vocations associated with attendees vary widely from inputs/raw ingredients and specialty chemicals, to compounders, mold builders, processors/molders and, finally, the OEM consumers of molded configurations.

Included in our gathering are third party experts (U.L., ASTM, professional test laboratories, etc.), software providers, fastener manufacturers, de-flash equipment/media providers, consultants, academics and students from across the country. Our list of speakers/papers is drawn from the mix of attendee types mentioned above. Paper topics range from technical, to operational through to part design, new market and field applied case studies.

Our 2017 venue is top notch. The Scottsdale Resort at McCormick Ranch is a special property and will provide more than adequate accommodations inclusive to itself. I would suggest the poolside amenities, golf and MLB spring training also make the third week of March a winner for families seeking a break from the long winter. Bring your spouse, significant other, kids, etc.! The SPE discounted rate is extended to cover three nights before and three nights after the event.

An open request for papers has just been issued, and we are in the process of reviewing the abstracts. I have stepped forward to offer a talk based on my 23 years of thermoset experience called 'BMC Compounding Practices And Their Affect on Molding Success'. Join me by submitting your title and abstract to [len@lennunnery.com](mailto:len@lennunnery.com).

I look forward to seeing you this March in beautiful Arizona!

Sincerely,

*Len Nunnery*  
*SPE Thermoset Division Chair*



## **IDI Composites International Expands Worldwide Manufacturing Capacity through Joint Venture with SMC Composites in Mexico**

IDI Composites International announced today they have entered into a joint venture agreement with SMC Composites in Mexico City, Mexico. The newly named company, IDI Composites International Mexico, will focus on expanding IDI's worldwide footprint and bring the number of IDI's global manufacturing facilities to seven.

Demand for IDI's proven line of Sheet Molding Compounds (SMC) and Bulk Molding Compounds (BMC) is at an all-time high and IDI's newest product line, Structural Thermoset Composites (STC®), is meeting the need for more advanced and higher performing materials in applications requiring high strength and low density. IDI recently completed a multi-million dollar expansion and upgrade of their Noblesville (USA) manufacturing facility and corporate headquarters.

"The timing of this deal makes sense for us as global demand for our products continues to grow and we see this continuing for the foreseeable future." states Tom Flood, IDI Composites International's Vice President and General Manager, North America. "In addition, we continue to research and develop new materials that keep our product lines and the industries we serve expanding." he adds.

With state-of-the-art manufacturing facilities currently in operation in Mexico City, IDI Composites International Mexico will better serve the growing manufacturing base in Mexico and it also opens up markets in Central and South America.

"SMC Composites is very pleased to form a joint venture with IDI Composites International, a leader in SMC and BMC manufacturing worldwide, added Jose Octavio Lopez Presa and Pablo Zahoul, respectively SMC Composites' President and VP for Technology Development.

"This joint venture expansion will enable us to continue to take a leadership position in our industry and most importantly, we're excited about being able to better serve our customers." confirms Tom Merrell, IDI Composites International's President.

## Mar-Bal Welcomes Summer Interns

On Monday, May 16, Mar-Bal welcomed their 2016 Summer Interns. Over the past few years, Mar-Bal has developed a college internship program that provides for an excellent learning and training environment for the college student while also providing a great resource for projects with an infusion of energy from a new generation of young talent within the company culture. Mar-Bal has many industry leaders that provide outstanding mentorship and coaching during the entire summer and beyond. The experience gained by all involved has been incredibly valuable.

This summer, they have five students from four different universities working with Mar-Bal employees directly in Accounting, Engineering, Marketing and Plant Engineering while also gaining cross-functional interactions and knowledge from the other departments and leaders within Mar-Bal. The academic institutions represented this year include: Baldwin Wallace, University of Rochester, The Ohio State University and West Virginia University.



COMPOSITES ONE®

## Mar-Bal Takes Advantage of NEMA Membership

Membership in organizations is an important aspect of a company's success. Mar-Bal, Inc., headquartered in Chagrin Falls, OH and a thermoset composites leader, has taken advantage of these opportunities and recently joined The National Electrical Manufacturers Association (NEMA).

NEMA was founded in 1926 and is headquartered in Rosslyn, VA, with international offices in Beijing and Mexico. Over 400 organizations are members of NEMA. These organizations manufacture a wide range of products including lighting systems, distribution equipment, medical diagnostic imaging equipment and more.

Customized research and full-range lobbying services are just two of the many membership benefits. In addition, NEMA provides members international programs to promote market access.

"We are very proud to have been accepted as a member into The National Electrical Manufacturers Association", stated Ron Poff, Director of Global Marketing and Brands at Mar-Bal, Inc. Since our founding over 46 years ago, the electrical market has been an important aspect of our business. As members of NEMA, we will be able to learn from the association and collaborate with other members while also providing our own expertise in order to continue our success. Our strategic goal is to increase our investment in innovation and product development to gain business development opportunities and I am confident that NEMA will be an integral part of that plan," further stated Poff.

NEMA also provides standards for members to follow. Standardization has helped companies reduce cost, expand markets, and streamline operations. A detailed list of these standards can be found on NEMA's website .

NEMA received the Hermes Creative Award in 2014 and 2015. The purpose of this international competition is to recognize creative professionals involved in the concept, design, and writing of traditional materials and technologies.

To learn more about NEMA visit <http://www.nema.org/pages/default.aspx>

# IDI Composites International Announces Grand Opening of The IDI 3i Composites Technology Center

Noblesville, Indiana (USA) – July 11, 2016 – IDI Composites International, the premier global custom formulator and manufacturer of thermoset molding compounds for OEMs and molders, announced the opening of their IDI 3i Composites Technology Center. IDI created the 3i Composites Technology Center to help innovative customers solve their engineering and performance challenges and help them go beyond the value limitations of conventional materials.

Launched in conjunction with IDI's 50<sup>th</sup> anniversary, the IDI 3i Composites Technology Center is located in their Noblesville, Indiana world headquarters and is part of the newly dedicated John K. Merrell Center. The 3i Tech Center will serve as the research and development division of IDI Composites International.

Due to increased demand from OEMs for stronger, lower density and higher performing materials, the IDI 3i Composites Technology Center was founded to meet these industry-wide demands. The IDI 3i Composites Technology Center is totally equipped with state-of-the-art equipment and connected technology to partner with OEMs and molders to streamline and efficiently manage the breakthrough cycle for the formulation, testing and manufacturing of 21st century composite materials.

"As markets for our products expand, so does the demand for innovative new materials that can meet and exceed the challenges posed by a variety of environments and applications." says Tom Merrell,

IDI Composites International's President. "And as our customer base continues to widen, the need to create, produce and test new chemistries, formulas and parts prototyping plays an ever important role in the manufacturing to market cycle." adds Merrell.

"The 3i Composites Technology Center will promote the sharing of ideas in early stage innovation through Inquiry, Ideas and Innovation (3i)." states Larry Landis, Director, Technology and Quality for IDI Composites International. "Our 3i Tech Center will have a major impact on future breakthroughs that will benefit the entire composites industry." adds Landis.

## Plastic Engine Uses No Lubrication

ZeMC<sup>2</sup>, Archer Automotive and the design and CNC machining assistance of John Boesen of Texlon Plastics have developed a plastic engine. The engine requires no oil or other lubricants because of the wear resistance of the ZeMC<sup>2</sup> 38-58A composite bulk molding compound (BMC).



The only parts that aren't plastic are an aluminum cap in the combustion chamber and on the top of the Cylinder. After the test no wear was measurable or observable on any of the plastic or steel parts but the ALU gummed up the cylinder walls. We will repeat the experiment with a steel caps. The ZeMC<sup>2</sup> 38-58 A withstood a combustion change temperature of 425°C and the outside of the engine block reached 200°C. The 2 stroke engine was constantly exchanging cool air with the combustion air.

One of the major limiters of two stroke engines has been the pollution from mixing of fuel and oil. This little engine appears to eliminate this need. This development is ongoing.

## ZeMC<sup>2</sup> Announces a NEW Product



ZeMC<sup>2</sup> has overcome this metal/peroxide reaction and has just completed a two year shelf life study on ALU filled BMC. The BMC was placed in an open box, in a non temp controlled warehouse, in North Carolina. Summer temperatures were in excess of 38°C (100°F). The BMC molded as well as when it was manufactured. The attached photo is a part molded from this two year old BMC being tested for electrical resistance.

The measurable  $\Omega$  resistance through a 10 MM (3/8") disc is 0.00. We assume this will translate to thermal conductivity but have not tested yet.



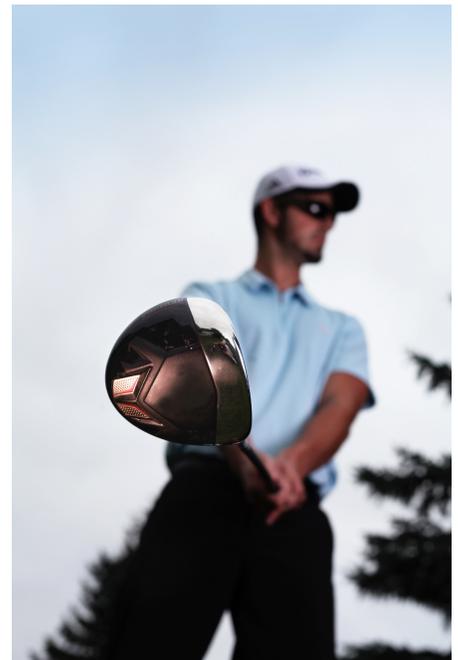
HUBER ENGINEERED MATERIALS

## A. Schulman to Launch Forged Preg Next Generation Composite Material at CAMX

A. Schulman Inc. (Nasdaq-GS: SHLM), a leading international supplier of high-performance plastic compounds, composites, powders, and resins, today announced that it will launch its Forged Preg next generation composite material at the CAMX show in Anaheim, California on September 26-29, 2016. A. Schulman will be exhibiting in Hall C, Booth 82.

Schulman's Engineered Composites business has developed a next generation composite material, Forged Preg in collaboration with the world's largest maker of premium, performance golf goods and the Company's fiber supplier. A. Schulman's long-term customer approached the Company's R&D team to find a lightweight material with superior surface appearance. The performance characteristics of the new composite material developed by the Company include higher strength and stiffness. The material is much thinner and allows the molding in fabric form. Forged Preg is also suitable for use in automotive applications requiring a lightweight material with high-end look and feel.

"Once again our R&D team has addressed the customer needs and developed a next generation material which helps our customers to succeed in the marketplace," says Frank Roederer, senior vice president and general manager Engineered Composites. "This development shows our firm commitment to long-term customer partnerships and joint product development across the composites value chain."



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heat resistance; dimensional stability;  
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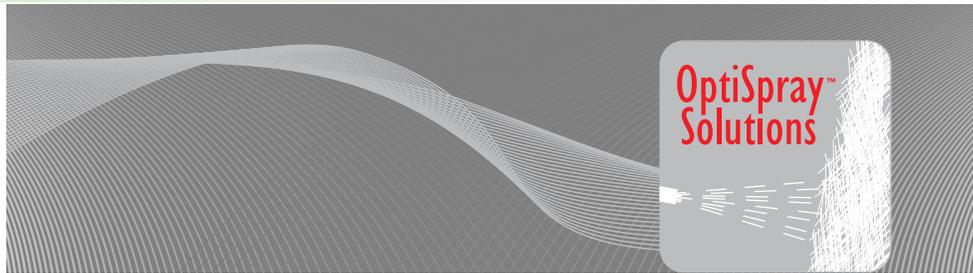


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- Excellent processability
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- Great mechanical properties



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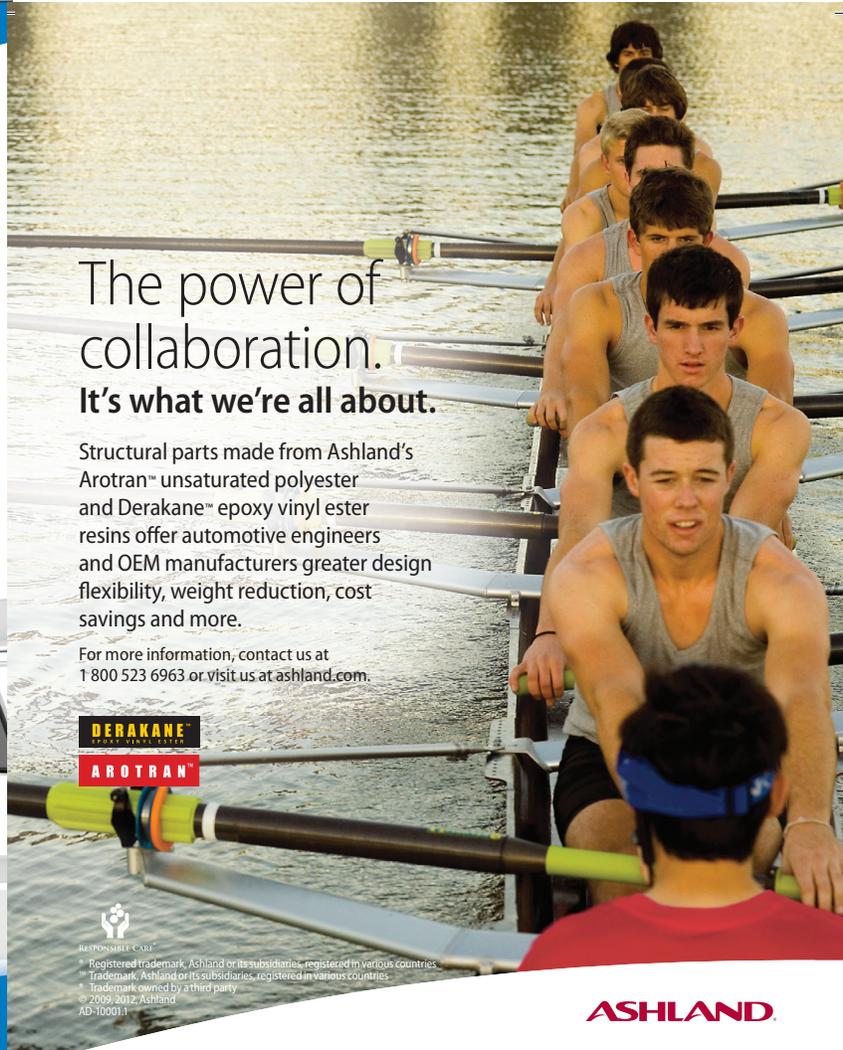


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