

Fall Issue 2015

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Upcoming Events

November 19

CMMA Breakfast Meeting (a week early due to Thanksgiving)
The Landing, Avon
Discussion Topic: Apprenticeship Panel
Tour: Galaxy Precision

December 10

CMMA Holiday Social
Brothers Bar & Grill, St. Cloud

January 28

CMMA Breakfast Meeting
Discussion Topic: Conflict Management
Tour: Midsota Manufacturing

February 25

CMMA Breakfast Meeting
Tour: Park Industries

Do you have suggestions for speakers or topics you'd like presented? Please contact the office.

Letter From Les

"Our own attitude is that we are charged with discovering the best way of doing everything, and that we must regard every process employed in manufacturing as purely experimental." – Henry Ford



Fall greetings CMMA members and friends! Our area harvest is underway; I hope you're also reaping the fruits of your efforts. It's a busy season at CMMA. Each October, manufacturers across the state open their doors to provide students, parents, and the public a chance to learn about modern manufacturing. Tour attendees see first-hand how STEM (science, technology, engineering, and math) skills are put into practice every day. CMMA thanks those members who participated in the Dream It Do It Statewide Tour of Manufacturing and encourages all to engage in this high return opportunity next year. One out of every seven Minnesota jobs are tied to manufacturing, and public tours are a great way to promote our industry, inspire young people, and fill open positions.

With much appreciation for continued investment from our members, and with responsible board level management practices, CMMA continues to be in a solid financial position. The Association is growing and providing credible return on investment. The recently established CMMA Foundation provides another alternative for investment in the future of manufacturing; CMMA members and friends are encouraged to make charitable contributions in support of workforce development efforts in the region. The CMMA Foundation awards grants to support educational opportunities for students of all ages to learn about manufacturing and become interested in manufacturing careers.

High school robotics teams are busy designing, building and testing their robots and equipment for the upcoming competitive season. CMMA wholly supports STEM activities at area schools. Visit your local school/robotics team and ask how you can help them succeed. You'll leave motivated and excited for the future - theirs and ours!

Remember to post your manufacturing jobs on the CMMA website (free!). Consider following the lead of several CMMA members (noted elsewhere in this newsletter) and schedule a visit with your local legislator(s), at which time you can share insight about the need for skilled employees, affordable healthcare, and other concerns that impact your company.

A nice crowd gathered for the CMMA Summer Social in August; events like this provide an opportunity to connect and converse about business, friendship, and the future. Looking ahead to future CMMA meetings, members can continue to expect insightful and informative presentations coupled with a tour of a world class manufacturing facility. We greatly appreciate area manufacturers opening their doors to us. Plan now to attend and get connected and educated.

CMMA. Coming together, working together and succeeding together.

In service, Les Engel, CMMA President

Featured Member: Sunrise Fiberglass, LLC



Since 1968 Sunrise Fiberglass, LLC has been producing custom molded fiberglass components and assemblies. Their environmentally controlled, state-of-the-art, 10 acre manufacturing facility is located off of I-35 in

Wyoming, MN just north of Minneapolis.

Fiberglass is a strong lightweight material and is used for many products. It is a type of fiber reinforced plastic where the reinforcement fiber is specifically glass fiber. The glass fiber may be randomly arranged, flattened into a sheet or woven into a fabric. The plastic matrix may be a thermosetting plastic – most often epoxy, polyester resin – or vinyl ester, or a thermoplastic. The glass fibers are made of various types of glass depending upon the fiberglass use. These glasses all contain silica or silicate, with varying amounts of oxides of calcium, magnesium, and sometimes boron. To be used in fiberglass, glass fibers have to be made with very low levels of defects.

Although it is not as strong and stiff as composites based on carbon fiber, it is less brittle, and its raw materials are much cheaper. Its bulk strength and weight are also better than many metals, and it can be more readily molded into complex shapes. At Sunrise Fiberglass they fabricate with quality FRP (fiber reinforced plastic) to create a mold either supplied by the customer or created at Sunrise from hand-building or CNC machine 3D CAD file patterns. They offer both open faced contact molding and closed molding.

Closed molding operations utilize LRTM (light resin transfer molding), CCBM (closed cavity bag molding), and VIP (vacuum infusion process). LRTM allows for reduced emissions, tighter tolerances, and a smooth finished surface on both side versus conventional open molding. VIP and LRTM are vacuum-assisted, closed-mold resin processes. For compression on the B-side surfaces, VIP uses a flexible sheet or re-usable bag, and LRTM employs a lightweight counter tool. This process yields increased laminate compression, a higher glass-to-resin ratio, and excellent strength-to-weight characteristics. With these processes the reinforcements are placed in the mold dry, frequently combined with cores or other special inserts. Vacuum is then applied to compact the reinforcement and eliminate air. Resin is introduced and the vacuum draws it through the reinforcement.

Very large parts can be made by VIP method utilizing very low viscosity resin and an appropriate fill time with bleeder film and other venting. This resin infusion process results in very low void content and excellent mechanical properties due to the relatively high glass content. Fiber content is determined by fiber architecture and pressure. In contrast, the LRTM process resin is introduced via a pumping mechanism. More flexibility in types of resins and fillers is possible, and an intermediate range of fiber contents. Benefits are better cosmetic finishes and variation in part thickness, and faster cycle times for lower cost. Tools can be aluminum, steel or composite.

Closed Cavity Bag Molding is another way to vacuum bag a part but with a reusable silicone bag. High volume simple shape parts are generally used in this process. In this process the fiberglass mat is placed inside the female tool. Then the silicone bag is placed over and a vacuum chamber is placed on top of the tool. Vacuum is applied to hold down the chamber and remove air from the part. Then resin is pulled through. When the part cures the silicone bag is removed from the part.

Open face molding includes hand lay-up and spray-up techniques. Hand lay-up is a widely used molding process because of the cheap tooling cost and can fit almost every application. The tool side will have the finished surface, which can be top-coat painted or gel-coated. The fiberglass mat is cut to pattern requirements. The laminator then saturates the glass with resin and then applies to mold. With brushes and rollers all the air is rolled out and then part is pulled from tool when the resin cures.

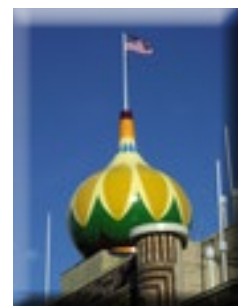
Fiberglass spray lay-up process is very different from the hand lay-up process where the resin and reinforcements are sprayed onto a reusable mould.

Because fiberglass is durable, heavy-duty, yet light-weight, it is perfect for components used in construction and heavy equipment. Fiberglass cabs add security and protection without added weight and cost. The same can be said for components for transportation vehicles which can help to improve mileage. Fiberglass farming equipment covers, for example, add protection and safety as well as customized forms to maximize the usability of agricultural machinery. Sunrise Fiberglass also specializes in fiberglass components for cellular communications and cellular tower concealment; also acoustic panels and components for emergency response vehicles, recreational vehicles and laboratory equipment.

In 2012 Sunrise Fiberglass Corp. became Sunrise Fiberglass, LLC. Since the acquisition, numerous capital investments have been made in engineering, enterprise requirements, planning systems, and automation. The latest investments enable Sunrise to work with customers from the initial design utilizing CAD Systems. They now perform design for manufacturability (DFM) and offer pattern options which can go directly to CNC machining. This process provides the most consistent dimensional fit possible. Check out their website, www.sunrisefiberglass.com to see all that Sunrise Fiberglass, LLC can do.



Multiple run cabs for cranes



Decorative architectural element

Tours with Legislators

Early in the summer CMMA reached out to manufacturers and legislators to promote "Legislative Tours in August". With positive response from several manufacturers arrangements were made for legislative visits.

Senator Scott Newman and Representative Dean Urdahl visited American Time in Dassel. Ronda Anderson, Marketing Manager at American Time had this to say, "I just wanted to thank you for your help in setting up the visits with Rep. Urdahl and Sen. Newman. Both conversations were unique based on their current and previous experience. We really enjoyed the opportunity."

Louis Industries, Midsota Manufacturing, Starrett Tru-Stone Technologies and Pellco Machine also hosted legislative visits.

Contact the association office if you would like help in setting up a legislative visit at your company.



Senator Scott Newman visits with an employee at American Time

Randy Pelletier, owner of Pellco Machine (left) is pictured with MN Representative Eric Lucero. Lucero toured the precision machining company and heard about their need for skilled employees, affordable healthcare options, and more.



George Wilkes (left), president of American Time, presented MN Representative Dean Urdahl with a Dassel-manufactured clock to use in his office in St. Paul during a CMMA "Tours with Legislators".



Welcome New Members!

American National Bank of Minnesota

Frandsen Bank & Trust

Freeland Briese, LLC

Mahowald Insurance Agency

Paynesville Area High School

Board Bio



Name: Ken Voigt

Where do you work, what do you do? I am the General Manager at BlackHawk Industrial – North Central Region.

What was your first job? My first job was a Machinist.

Hometown: St. Cloud, MN

Family: I have a wife and three children.

Pets: We have a dog and a cat.

Do you have a favorite book or author? American Sniper

Favorite movie? Action movies

Favorite food? Spaghetti

Do you have any hobbies, play any sports or favorite games? I enjoy pretty much anything outdoors.

Comment on your involvement in CMMA: I believe CMMA is a great organization with a purpose.

CMMA Funds K-12 Programs

The CMMA Education Sponsorship Program encourages K-12 institutions in the CMMA service region to submit grant applications for a project/activity related to manufacturing and/or STEM.

Two such applications received funding approval at a recent board meeting. CMMA awarded \$500 to Glencoe-Silver Lake High School to help with the purchase of materials needed to build a vehicle for the annual MTEEA Supermileage Challenge. Some twenty students are involved with the school's Supermileage team. Sauk Rapids-Rice High School received a grant from CMMA in the amount of \$1,000 to purchase the supplies needed - such as servos, pneumatics, and electronics - to launch a Humanoid/Robotics Engineering Project.

Your membership dollars and volunteers efforts really are making a difference! Feel free to encourage your local high school to submit an Education Sponsorship Application; call the office for details.

CMMA FOUNDATION

Managed by CommunityGiving

Did you know...

CMMA is working to change the image of manufacturing and increase interest in manufacturing careers? Collaboration with area high schools includes:

- ✓ Grants to purchase materials/equipment
- ✓ Grants to support robotics teams
- ✓ Grants for field trips to mfg facilities
- ✓ FREE K-12 membership in CMMA
- ✓ FREE K-12 attendance at CMMA meetings/tours
- ✓ Scholarships awarded to manufacturing-focused students
- ✓ Over \$70,000 awarded since 2008!

Did you know...

The CMMA Foundation was established to help fund workforce development activities.

- Donations are treated as Charitable Contributions by the IRS (full tax advantage)
- Donations of any amount are encouraged
- Donations accepted from a company and/or individual

Are you ready to learn more?

800.654.5773 or midwest@runestone.net



**Bring a guest to a
CMMA meeting
for FREE!**



A cost effective way to reach a broad manufacturing audience.

To learn more, contact
Sandy Kashmark at 800-654-5773 or
midwest@runestone.net

Did You Know?

VEX Judges needed

North Jr. High in St. Cloud is hosting its first VEX robotics tournament on December 12th and is in need of industry professionals to help with judging. Judges will interview the teams, review their notebooks, and judge overall design and build of robots. Training is provided. Contact Sara Laudenbach at Sara.laudenbach@isd742.org or 320-251-2159 ext 4108.

SCSU Business Consulting Class Searching for Projects

Are you interested in hosting a consulting team for a semester to work on a project that can benefit both you and the class? [Click here](#) for more information.

CMMA Moved To An Online Evaluation

After each meeting an online survey is sent out soliciting feedback. The response has been great!

Nominations for CMMA Board of Directors - Nov. 19 Deadline

Nominations are open for members interested in serving a 2-year term. All owners and employees of CMMA member companies are eligible to serve. Contact Sandy at 800-654-5773 if interested.

Educators are FREE!

Invite a representative(s) from your local high to an upcoming CMMA meeting. Teachers, administrators, and students are encouraged to attend FREE of charge (includes a free breakfast). And – membership in CMMA is FREE to area high schools!

Job Openings Posted Free of Charge

Post your manufacturing-related job openings on the CMMA website for FREE! Contact the CMMA office for details.



Like
CMMA
on
Facebook

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