

Molded Fiber Glass Companies'

COMPOSITES

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SUMMER 2008



Upgraded MFG SMC Manufacturing Facility



MFG Introduces "iCOM"

Advanced SMC Formulating and Manufacturing

In 2007, CEO Richard Morrison issued a challenge to his Molded Fiber Glass teammates, "What does it take to become a world class formulator and producer of Sheet Molded Composites (SMC) and Liquid Molded Composites (LMC)? To answer this challenge, a special team was created and the strategic project defined-codename: **HAWK**. In pursuit of the best technologies and manufacturing practices, Denise McClure and the Hawk team members visited other composite manufacturers, documenting along the way the best practices for SMC and LMC manufacturing. The team utilized Six Sigma and Lean tools. The results of these project HAWK discoveries were later shared with all the composite companies that contributed.

After an intense in-depth study, the team developed MFG's new procedures and practices. The team implemented new standard practices, installed proper testing procedures, and established "data tracking" of all materials. Training of teammates in the best practices and principles was provided. In addition, MFG invested in an upgrade of the SMC and LMC manufacturing, laboratory and office areas. All changes have been based on implementing the practices and principles developed during project Hawk.

The culmination of Project Hawk has given birth to MFG's newest entity, called "iCOM." This new entity is charged with producing world class composite materials. MFG wants to be among the industry leaders in the quality of formulations and material systems. iCOM will continue to strive to achieve the goals set forth by the Hawk team: "Creating a new standard of technical excellence in SMC/LMC formulation and manufacture."

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Hawk Team Members



iCOM Team Members



MFG Energy Services (WES) to Support Rapidly Growing Market

Wind Energy Services Company (WES), a subsidiary of Molded Fiber Glass Companies, recently held grand opening ceremonies for two new facilities in Independence, KS and Sweetwater, TX to tap the rapid growth in the US wind energy market. Lt. Governor Mark Parkinson officially cut the ribbon at the Kansas facility.

The 3-acre facility in Sweetwater, TX is located within 200 miles of more than 6,000 megawatts of operational wind energy (almost half of US capacity) and within 30 miles of more than 10 major wind energy projects. Due to the facility's location, WES can offer immediate on-site response and service, including up-tower repairs and in-house repair of large turbine blades.

WES mobile response service teams can quickly repair lightning damage, shipping and installation damage, cracking, erosion and coating failure as well as blade balancing and general warranty repair. The frequency and length of downtime is critical to a wind farm's success, so WES is focused on delivering fast, flexible streamlined response.

Under the guidance of General Manager Ricardo Arellano and Field Service Manager Thomas Herrera (who have more than 40 years combined wind energy experience), WES is well equipped to take a lead in the growing wind energy market.



Two WES field service crews.

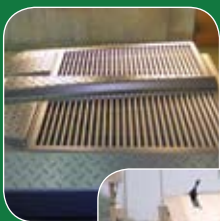


Ribbon cutting ceremony for Kansas facility. Pictured (l to r): Ricardo Arellano, WES Operations Mgr; Richard Morrison, MFG CEO; Kansas Lt. Governor Mark Parkinson; Pete Emrich, MFG VP of Technology.

MFG Sees New Opportunity in Military Applications

In response to expanding opportunities, MFG has added a new business segment that will focus on products for defense and military applications. Many applications are being discovered where the benefits of composites – added safety, improved durability and reduced production cost – make the outlook for this new segment very promising.

Here are a few interesting examples:



New composite hoods for the next generation Humvee, a mine-resistant ambush protected (MRAP) vehicle. The MFG Design Center re-designed a steel hood into a molded part, made of DCPD, that would eject when a bomb hit the vehicle. MFG Northwest has produced approximately 1,000 hoods for a major military equipment provider.



MFG Galileo has been funded by Defense Advanced Research Projects Agency (DARPA) to advance technology for ground-based radomes. This project is follow-on to earlier work for DARPA and will examine new ways to increase radome performance and reduce maintenance costs for end users.

Anti-ballistic liners (aka soles) for spider boots – part of the uniform for bomb disposal squads in mine fields around the world. MFG Composite Systems Company makes the liners out of a special proprietary composite.



Kitchen pods – complete kitchens made out of 90% fiber glass – used by the US military in Desert Storm. Through Carlin Manufacturing, MFG manufactured the entire pod – frame, walls, floor and ceiling. Insulated and weather-resistant, these 20 to 40 foot units can be transported by rail and dropped in the field by helicopter.



Standing for Excellence

Lean Six Sigma Projects Spread Our Lean Culture

MFG de Mexico achieved dramatic savings by taking an innovative approach to outfitting eight workstations with a dust collection system. Faced with a total cost of \$800, the team found a local source and purchased eight copper fittings for \$1 each and then spent \$115 on 200' of one-inch vacuum hose. They adjusted the fittings in a lathe to fit the hose, and ended up with a solution for about \$123. A savings of nearly \$650! Team Leader Victor Chairez led the effort with teammates Miguel Cardenas, Cecilio Cerda, Pedro Juarez, Manuel Nunez and Francisco Ramirez assisting. This was not a formal Lean 6 project, but an example of how MFG's lean culture is always on the lookout for possible cost reductions.



This \$123 customized fitting and off the shelf hose saved nearly \$650!



MFG de Mexico Lean 6 Team Leader Victor Chairez accepting congratulations from MFG Sr. VP Joe Wilk.

MFG Alabama discovered that cost savings can be obtained by recycling, starting with cardboard. To cut the cost of hauling discarded cardboard to a landfill, project leaders Dave Whisonant and Mark Jackson and teammates learned the correct method of preparing cardboard for recycling and set up a designated storage area. In 2007, the cost of hauling away the cardboard was just under 0.05% of Alabama sales and this project cut those costs by 50%. More recycling projects are now in the works – for unused balsa wood, metal rivet mandrills, stainless screens and metal hardware with hatches.



MFG Alabama Teammates Dave Whisonant and Mark Jackson showing off the newly organized cardboard recycling area.

MFG Premier Molding Company is getting Leaner fast with several Lean 6 Green Belt projects, plus a Lean 6 and 5S training session for all teammates. The PMC Greenbelts from Class 1 – Bruce Bassett, Greg Quirk and Becky Hazeltine – are using Lean tools to improve the plant layout for molding Pontiac Solstice parts. They're also leading teams to evaluate press capability, develop ways to reduce cure times, identify excess scuffing and measure preform glass content without cutting the glass.

All PMC teammates attended a two-hour introduction to Lean 6 and 5S training session given by Lead Six Sigma Black Belt Charles Culberson. Thanks to Norberto Cosme's efforts, the training was also offered in Spanish.



The January 28 Lean 6 and 5S training at MFG PMC was conducted in Spanish as well as English, thanks to Teammate Norberto Cosme.


**Teammate
Applause**

Promotions and New Arrivals



Keith Bihary

Corporate Sales Director and
CSC Sales Director, compression
molded work for 5 MFG entities



Robert Dinsmore

Plant Manager,
MFG South Dakota



Rhonda May

Human Resources Manager,
MFG South Dakota



Rad Sideris

Senior Design Engineer,
MFG Design Center

Market Update for Construction Products

Recent trends in the building and architecture industries are creating a positive uptick in demand for MFG Construction Products' custom fiber-reinforced polymer (FRP) column form business.

"The trend toward more ornate and decorative architecture is expanding and driving the need for more complex shapes," explained Dennis Vorse, General Manager, MFG Construction Products. "This trend showcases our capability for making detailed, complex column forms for concrete shaping."

One example is the 75-story, glass and titanium-skinned Beekman Tower under construction in lower Manhattan, New York City. Designed by renowned architect Frank Gehry, it uses four 19-foot elliptical shaped column forms custom-designed by MFG Construction Products. The mammoth columns will span the first two floors of the inside lobby, creating an imposing presence. In addition to 903 apartments, the project includes a four-story public school, an ambulatory care center, 13,000 sq ft of retail space and parking for 175 cars. It is scheduled for completion in mid-2009.

Another high profile project using MFG CP custom-designed fluted column forms is The Century in Los Angeles. Designed by world-renowned Robert A.M. Stern Architects, it is a 42-story residential project in Century City that features panoramic views stretching from downtown to the Pacific Ocean.

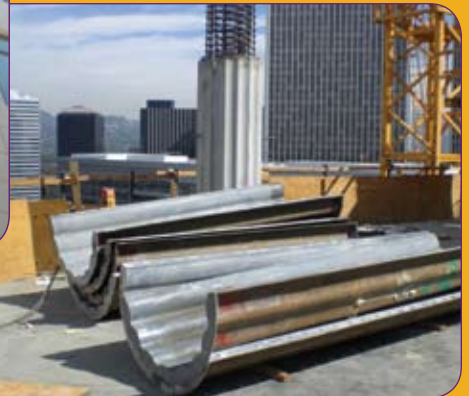
With projects of this calibre and the heightened awareness in the construction communities about CP's capabilities, new business potential is spiraling.



MFG CP teammate sending off the custom 19-foot elliptical shaped forms to NY. These forms produce columns for the Beekman Tower, a 75-story glass and titanium-skinned residential project in downtown Manhattan.



The finished columns can be seen inside the windows of the The Century, a 42-story residential project designed by world-renowned Robert A.M. Stern Architects.



Created in quarter sections, the fluted column forms for the Los Angeles project were delivered as full-forms. The composite properties make the forms corrosion resistant and reusable for future projects.

MFG in the Neighborhood

Richard S. Morrison Foundation Grant Helps Harvest for Hunger Set Record



This year, MFG made a huge difference to Ashtabula County residents who otherwise would have suffered without sufficient food on their tables. The Harvest for Hunger food and funds drive set a record, thanks in part to a matching grant from the Richard S. Morrison Foundation. The Foundation offered a dollar-for-dollar match on contributions made by Ashtabula residents, up to \$10,000. The result was inspiring – \$16,654 and 2,433 pounds of food were donated!

"This grant encouraged residents to contribute and helped raise awareness," said Barbara Klingensmith, Executive Director of Country Neighbor, which coordinated the effort. "We are grateful for the leadership of the Richard S. Morrison Foundation and everyone at Molded Fiber Glass who stepped up to help."

The funds raised will provide food to 22 local hunger programs and the families they serve. This year's drive, with the matching grant, collected \$25,654. We're proud to be part of this worthy effort.



Richard Morrison, MFG CEO (second from left) delivering the funds to Barbara Klingensmith, Executive Director of Country Neighbor, surrounded by food pantry volunteers.