Green Manufacturing Industrial Consortium
Semi-Annual Member Update Meeting
WMU Parkview Campus
May 3, 2010

Associate Director’s Report
David Meade, Ph.D.
Outline

• Membership Update
  • New Members
  • Research Activities with Members
  • Recruiting Efforts
  • Budget Review

• West Michigan E3 (WM-E3) Integration

• Action Items
Membership Update

• Members:
  • Fabri-Kal
  • Landscape Forms
  • Post/RalCorp

• Short List (target by next semi-annual meeting)
  • Cascade Engineering
  • Haworth
  • Kellogg’s
  • Herman Miller
  • Denso

  Hope for 3 out of 4
Research with Members

• Landscape Forms – furthest along
  • WMU Assessment – site work complete, report by May 19
  • Michigan Industrial Energy Center (MIEC) - site work complete, waiting for report (any day)
  • Green Supplier Network – Lean/Green Value Stream Assessment, 70% complete
• Target Projects taking shape:
  » Wood utilization improvement
  » Oven waste heat reclamation for washer
  » Sawdust-to-energy (biomass) study
• LF is also participating in the Waste Powder Paint User Group
Research with Members (continued)

- **Post (RalCorp)**
  - Chose not to do Assessments, instead chose to utilize GMIC resources on existing projects
    - Saves $3,300 in “outside contracting” costs
  - 2 projects selected:
    - “Dumpster Dive” to evaluate other recycling “opportunities” in current waste stream
    - Heat management of drying ovens – analysis to determine the “optimal” operating parameters (curves) to minimize gas use under an environment of varying process input conditions
Research with Members (continued)

• Fabri-Kal:
  • Held Assessment Process Kick-Off meeting on March 4
  • FK site coordinator identified – Tom Bush, V.P. of Engineering
  • MIEC “on-site” scheduled for May 23, report takes 6-8 weeks
  • WMU team assessment to take place in early May
  • GSN Value Stream assessment TBA (likely June)
Member Recruitment
Activates

- **Presentations**
  - SW Michigan Alliance, Niles, MI (Jan 13, 2011)
  - Cornerstone Alliance, Benton Harbor, MI (Jan 14, 2011)
  - Lean Supplier Network – Steelcase (Jan 26, 2011)
  - Michigan Energy Conference FSU, Big Rapids, MI (April 13, 2011)
  - Waste Powder Paint User Group WMU, Grand Rapids, MI (April 19, 2011)

- **Calls**
  - Haworth, Holland, MI (December 3, 2011)
  - JCI, Holland, MI (December 8, 2011)
  - Rapid Line, Wyoming, MI (Dec 17, 2011)
  - Heinz, Holland, MI (Jan 31, 2011)
  - Wright Coatings, Kalamazoo, MI (Feb 17, 2011)
  - Light Corp., Grand Haven, MI (Feb 18, 2011)
  - Technocoat, Holland, MI (Feb 18, 2011)
  - Cascade Engineering, Grand Rapids, MI (Mar 10, 2011)
  - L3 Communications, Muskegon, MI (April 21, 2011)
  - International Automotive Components, Mendon, MI (May 5, 2011)
WMU's Green Manufacturing Industrial Consortium continues to grow

Published: Thursday, April 28, 2011, 9:00 AM

By Olivia Pulsinelli | Business Review West Michigan

Western Michigan University’s Green Manufacturing Industrial Consortium is halfway to its initial goal of six members, and continues to grow.

Post Foods in Battle Creek is the third company in the consortium, “a partnership to assist West Michigan businesses in reducing energy usage,” according to the university.

Post also is the first founding member of the consortium. The other two founding members are Fabri-Kal and MiBiz.com.

Rapid-Line focuses on energy overhead

MONDAY, MAY 02, 2011

WYOMING — Rather than worry about business factors he cannot control, Mark Lindquist, president of Rapid-Line Inc., has set his sights squarely on a familiar target: energy usage.

Please log in or register to read the full article. It's FREE and it only takes a minute!
Project activities in target member companies (funded by GMI)

- Greener Paint processing:
  - Waste Paint minimizing, reuse and recycling (Haworth, Herman Miller, Steelcase, Stryker, Irwin Seating, General Motors, Rapid Line)
  - Oven Door Seal and Waste Heat reduce/reuse (Wright Coatings, Rapid Line)
  - Alternative paint materials (Herman Miller)
- Incineration process waste and heat reclamation (Herman Miller & Sauder Woodworking)
- Real-Time Energy Monitoring & Electrical Energy Peak Power Management (RapidLine w/dmStratigists)
- Quad Generation (Bells Brewery)
Center Development

• First Year Focus – Energy and Materials
  “Quick return” focus – low hanging fruit

• Target Areas: \textit{(Environmental Focus)}
  1. Material Intensity/Efficiency (recycling is an indication of inefficient material use)
  2. Energy Efficiency (membership fee could easily be saved through low/no-cost improvements in energy use)

• Activity:
  1. Site assessments to identify a list of $ savings opportunities in focus areas
  2. Completion of one applied research project chosen from list – goal: ROI on membership fee

\textit{One cost savings project per company leveraging the collective knowledge and experience of the consortium member companies}
Project Identification

• We have partnered with the Michigan Manufacturing Technology Center (MMTC) to jointly roll-out the EPA’s E3 Program (Economy, Energy, and Environment) in West Michigan (WM-E3)

• Benefit to Consortium Members: Three Phase Assessment Process
E3: Economy, Energy and Environment

What is the E3 Initiative?

Evolving from the Green Suppliers Network, the E3 Initiative is a coordinated federal and local technical assistance initiative to help manufacturers adapt and thrive in a new business era focused on sustainability. The program provides technical assessments of production processes and training in four key areas:

- Lean
- Clean
- Energy
- Greenhouse Gas Emissions

Depending on the processes of a company, either large or small, the assessments and training target opportunities to:

- Maximize energy efficiency
- Reduce environmental wastes
- Identify opportunities for reducing carbon emissions
Assessments

• Phase I: Energy Audit
  – Conducted by the Michigan Industrial Assessment Center (MIAC) housed at the University of Michigan
  – $10,000 Value, funding provided by the U.S. DoE

• Phase II: Targeted Material and Energy Intensity Audit
  – Conducted by a WMU student/faculty assessment team
  – Deep dive in key areas of material and energy waste

• Phase III: Lean & Green Assessment
  – Conducted by the MMTC
  – Targets one “value stream” for a detailed analysis of all aspects of waste elimination in both traditional lean areas (7-wastes) and green areas (utilities, materials, and environment)
  – $10,000 Value, funding provided by Consumers Energy, member dues and other sponsors
Approximate Assessment/Project Process Timeline

- IAC Assessment (U of M)
- Energy and Material Assessment (WMU)
- Lean Green Assessment (MMTC)
- List of Opportunities
- Engineering Project

Months

0  1  2  3  4  5  6 - 8
Action Items

• Continue to recruit members – target 3 by the end of summer
• Complete the assessment process for Landscape Forms (mid June) and Fabri-Kal (end of July)
• Select projects for Landscape Forms and Fabri-Kal, Assemble project teams, initiate projects
• Complete projects for Post, Landscape Forms, and Fabri-Kal (Dec 2011 – Jan 2012)
Questions?

Thank You