Fort Wayne ENGINEERS' Club

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Find us on

October Tour

October: Embassy Theatre - Pipe Organ (NOT the overall building)
Date: Monday, October 19th
Time: 6:30 pm
Location: 125 W Jefferson Blvd, Fort Wayne, IN 46802

RSVP by e-mail to info@FortWayneEngineersClub.org or by phone (260) 456-0809. Guests must be 18 years or older and able to climb ladders, catwalks with minimal or no railings, and tight spots. MEET AT THE BACK STAGE DOOR behind the building (south wall of the building). There should be ample parking in the Embassy's south lot.

MUST WEAR MASKS. MUST wear closed shoes and clothing suitable for climbing and descending ladders. Please have eye protection or glasses.

Installed in 1928, the Embassy's Grande Page Pipe Organ is one of three of its size built, and the one of two still in its original home. Built by the Page Organ Company of Lima, Ohio, the Grande Page Pipe Organ is loved by organ enthusiasts and

novices alike. In 2014, the Grande Page console was restored and repaired over a ten-month period.

Upcoming Events

November: Nuclear Fission and Hydrogen Fuel Production
Date: Thursday, November 19th
Time: 6:30 pm
Location: TBD

January: Semi-Truck Fuels, Electrification and Aerodynamics
Date: Thursday, January 28th
Time: 6:30 pm
Location: TBD

September Tour Summary

Thirteen people attended a September 24 event for FWEC at Wagner Meinert's main facility (7617 Freedom Way, Fort Wayne). Wagner Meinert LLC, widely known as WMI, specializes around a range of industrial contracting, design, and maintenance services for mechanical, refrigeration, food process, and related professions. Facilities and employees are distributed strategically between the tip of Florida and the Great Lakes region, but services are not limited to those areas.

WMI was a spectacular host with good food and nearly as many presentations as FWEC members. Our student turnout was very disappointing due in part to school restrictions concerning exposure to corona virus. Hopefully, this report can do justice to the sheer range and reputations of WMI.

Among other functions, five PE's and two additional engineers at this facility use advanced CAD to custom design projects from small changes to entire facilities. An impressive coherent facility, inside the same building as the engineers, fabricates large units which can be trucked to a job site and rapidly assembled together. This system almost assures everything meets quality standards and physically fits together before leaving their birthplace. Many of us found the workmanship

stunning, and WMI feels cleanliness is essential around fabrication of ammonia or food components.

A significant and costly segment of operations at various locations is warehousing supplies and replacement parts for reliable and almost immediate availability. WMI was already a recognized source of respirators and full range of industrial safety gear, so they committed to having some level of genuine facemasks available for clients during the corona virus confusion. Almost underemphasized during our tour, this in-house warehousing is an educated break from just in time inventory despite the expense in product, physical space, and management.

The engineering group has successively upgraded its portable laser units. These map a facility and integrate existing infrastructure with the advanced CAD, providing visuals that even include creases in siding and trusses. A laser unit at our meeting registers 250,000 measurements per second, but is being replaced with a new generation that automatically synchronizes with GPS. The GPS allows near-instant alignment with measurements taken virtually anywhere else (Ed.: most sources say within less than an inch). Ford is trying to integrate a laser unit onto a small fully-autonomous mobile unit, to map its facilities ahead of annual renovations. Ford hopes autonomous mobile units will be able to document actual workflow as part of a continuous improvement process.

WMI's overall organizations allow it to briskly supply replacement components for reasons from simple wear to tornado damage throughout the regions that they normally do business, as well as very good responses outside that range. They emphasize that their categories of customers can easily lose a million dollars per day during shutdowns. Even scheduled maintenance or renovations must be rapid and on schedule.

A mobile Progressive Maintenance service is available, composed of nearly 100 women and men with trucks and equipment. These also serve as a reserve pool of highly skilled labor for emergencies, such as storm or flood damage. A specialty within progressive maintenance can be monitoring of vibration, which can head off wear in motors and pumps by fairly simple realignments. Another key advantage is knowing to replace or renovate well before multi-million dollar failures occur. This group can be integral to continuous improvement, productivity, safety, environment, documentation, and/or regulatory compliance. Modern facilities, especially food processing, are large complex operations with a host of these sort of intersecting concerns.

WMI is especially well known for industrial ammonia-based refrigeration. They have greatly expanded their routine range of alternatives and combinations, notably glycol mixes as well as refrigeration for retail stores. A use of glycol systems is refrigeration near large numbers of workers or customers for enhanced safety, while

still utilizing the energy efficiency of ammonia on a roof or separate building to cool the glycol. Ammonia is at least 60% more efficient than other contemporary methods.

Another significant specialty is contract services for essentially any aspect of environmental, health, and safety management. The workload and complexity of these topics typically require too broad a range of professional staff than the majority of businesses could afford in-house. FWEC members were all too aware that standard practices constantly and often abruptly change. WMI is in fact well known for covering explicit detail, regulatory knowledge, documentation, recurring training, audits, annual inspections, and more.

Process Safety Management (PSM), overall Process Management, Continuous Improvement, and more are also ever-evolving programs available through WMI's long-term in-house pool of people. As already written, WMI's experience extends from Florida to throughout most of the Great Lakes region, developed for nearly three decades.

Inherent to their other activities is expertise for initial and recurrent training programs. They are especially proud of their origins in ammonia and a Fort Wayne training facility for RETA (Refrigerating Engineers and Technicians Association), but WMI has been immersed in a host of other areas (course catalog available online). Leadership development for regular workers caught our attention in benefits for worker and employer.

WMI has ongoing expertise since 2006 in the evolving design and management of combining fish farming with hydroponic vegetable farming. (See October 2015 newsletter on the FWEC website for details of operating a local hydroponic fish farm.) Fish and vegetable production are separate operations linked with through shared water management systems. They offer the potential of providing one pound of edible fish protein for every pound of fish food. Farming already seriously reduces depletion of desirable wild fish and very significantly reduces trucking/boating energy use. The amount of desirable fish oil in the meat depends in large part on keeping the fish actively swimming (in a circle around a tank, instinctively against an artificial current) and rapid removal of excretion (using the fish tank's cyclic motion of water, much like primary settling tanks in water treatment plants). The fish wastewater becomes the basis for nutrient flow through the vegetable system, then cycling again through the fish system after perhaps 10% dilution with fresh well water. Warm water farming can include tilapia and cold water (for higher dissolved oxygen) salmon or trout.

A recurring theme throughout WMI's presentations was that failures involve million dollar losses for their clients, sometimes huge amounts of waste, and layoffs. WMI's attitude reflected pride and mutual support built around serious wide-ranging

expertise and no room for customer downtime. When needed, they have pooled all resources into given sites for as long as it took to speedily rebuild after storms, renovate with minimal downtime, or rapidly develop a new site.

We greatly appreciated and enjoyed WMI's hospitality. Sincere Thank You.

General Info

Fort Wayne Engineers Club dues are $0. Donations are welcome but strictly voluntary. In recent years, club funds have helped support Discover-E, annual bridge building contests in schools, academic awards, networking events, mentoring, our website, and facilitating free tours. Please see FortWayneEngineersClub.org, LinkedIn, or Facebook for updates on current Club activities, other news, and/or prior newsletters.

Those participating in activities through FWEC and our hosts does so strictly at their own risk, including disease exposures. Participation in club events is voluntary, free, nonprofit, and solely for the benefit of participants and the community at large.
Anyone with an interest may participate unless restrictions are specified for specific events, such as minimum age or minimum safety attire.

Local Opportunities

Experimental Aircraft Association Chapter 2
The Experimental Aircraft Association's Chapter 2 is still active. Check the EAA-2 website for current information!

Tekventure
TekVenture, a nonprofit, is available for activity by members and inquiries about what TekVenture offers. Visit their website and especially Facebook for updated information. The widely reported fire was in an adjoining private auto repair business. TekVenture is intact, well along in cleaning up smoke damage, and rebuilding a burned-out wall, which should improve natural light throughout the building. TekVenture has a very active potttery group with multiple kilns and aesthetic interests. It provides an ample array of machinery and workspace for budding business interests, as well as various hobbies and performing arts.

Interested in hosting a tour?

Contact us at info@fortwayneengineersclub.org

FWEC Board Meetings

The FWEC board meets eight times a year to plan and organize tours for our members. These meetings are open for anyone to attend. We are always looking for new members to join our team! If you are interested in being a board member please attend our next board meeting or contact us at info@fortwayneengineersclub.org.

**The FWEC has an urgent need to fill the club's Treasurer Trainee position. If you are interested in this opportunity please contact us!

Next Meeting
Date: Tuesday, November 3rd
Time: 7:00 pm
Location: 502 E Pettit Ave, Fort Wayne, IN 46806

FWEC roster for FY2020-2021

President: Nate Berndt
Vice President: TBD
Immediate Past President: John Magsam
Secretary: Marna Renteria
Treasurer: Ryan Stark
Treasurer-Trainee: TBD
First-year Board Members: Dave Gordon, TBD
Second-year Board Member: John Renie, Craig Welch
Third-year Board Member: Rob Cisz, Bert Spellman
Editor of Enginner News: Morgan Miller
Membership and Contact Chair: Dave Schaller
Northeast Indiana DiscoverE Chair: TBD

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