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Richard D. Stewart
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Great Lakes Maritime Research Institute

A University of Wisconsin - Superior and University of Minnesota Duluth Consortium

Quarterly Update

(July - September 2015)

October 2015

All Aboard!

Join GLMRI and the Transportation and Logistics Research Center as we celebrate our move to

UW-S Erlanson Hall, Suite 105

Our move consolidates the GLMRI personnel with the professional staff of the Transportation & Logistics Research Center

Come celebrate with us!

Monday, October 12, 2015 2:00-4:00 PM

Your ticket to board the GLMRI Open House

GLMRI Research Team Visits Chart Industries

As part of the research, GLMRI team members toured Chart Industries manufacturing facility in New Prague, Minnesota. On July 8, 2015, Dr. Richard Stewart, Ms. Carol Wolosz and LCDR Judson Coleman met with Mr. Kevin Jirak (Director, Projects, Engineered Systems), Mr. Ryan Felsenthal (Project Manager for Distribution and Storage Special Projects), Ms. Leslee Hallas (LNG Inside Sales), Mr. Paul Sjogren (General Manager for LNG Emerging Markets) and Mr. Kevin Thissen (Design Engineering Manager) to discuss the potential of moving LNG by ISO containers. Chart has been the leading cryogenic manufacturer for the entire supply chain of LNG equipment and processing systems worldwide. Tanks built in the Minnesota plant are built based on the customer requirements and demand. Currently, this facility does not produce ISO containers, but with the increasing demand, production options may expand. GLMRI team members were able to observe the production line and learn about Chart's processes and engineering inspections for product quality assurance.



Congratulations to Dr. Matthew TenEyeck!

GLMRI researcher Matt TenEyeck was awarded a Doctorate of Philosophy degree from the University of Minnesota's Water Resources Science Program, Limnology track in July.

Matt's research was supported through GLMRI from 2005-2010. His work focused on understanding potential "windows of invasion opportunity" for fresh water zooplankton discharged from ballast water into a harbor located within the Laurentian Great Lakes. His work was collaboration between University of Minnesota Duluth's Department of Biological Sciences, University of Wisconsin Superior's Lake Superior Research Institute, and the Northeast Midwest Institute's Great Ships Initiative.



STILL TIME TO REGISTER!

Natural Gas for High Horsepower
HHP SUMMIT | October 26-29, 2015
Dallas, Texas
Key Ballew Hutchison Convention Center



Again this year GLMRI is an endorsing partner for the HHP Summit - North America's largest and most comprehensive event focused on the economic and environmental benefits of natural gas for marine, mining, rail, drilling, pressure pumping and power generation operations. GLMRI attendees can save \$50 on registration using code GLMRI50; www.hhpsummit.com/register

Of Note:

Transportation Research Board (TRB) Involvement

As outcomes from the MARAD funded research, GLMRI researchers have been involved in TRB research extension on multiple levels:

- The paper prepared by Dr. Stewart and Ms. Wolosz on the Development of the Adoption of Liquefied Natural Gas as a Fuel for Shipping on the Great Lakes, was **published in the**

Transportation Research Record, Journal of the Transportation Research Board, Number 2479, pp. 1-8.

- Papers were written and submitted in July that are under review for the TRB Annual Meeting in January 2016.

- Liquefied Natural Gas (LNG) Bunkering by Vessel in the Great Lakes: An Analysis of Regulatory and Operational Issues. Co-Authored by LCDR Judson Coleman and Dr. Richard Stewart
- Japan Liquefied Natural Gas (LNG) Intermodal Container Operations: Applicability to U.S. Operations. Co-Authored by Dr. Richard Stewart and Ms. Hiroko Tada

- GLMRI members are also involved as paper reviewers for the TRB Marine Group Committees.

The Great Lakes Seaway Review April-June 2015 edition

–Editor Ms. Janene Pung included an interview with Dr. Richard Stewart.

Summer Moves

- LCDR Judson Coleman, USCG, joined the GLMRI research team in May to work on LNG research as part of the U.S. Coast Guard's Port Safety and Security Industry Training Program. He completed his assignment with GLMRI in July and moved to the second phase of his program working in the MARAD Office of Environment.



- Dr. Amit Mokashi accepted a position at New Jersey City University where he is teaching Accreditation Council for Business Schools and Programs accredited management courses Business Policy, Global Business and Global Management and conducting research in Strategy & Technology Management, Innovation, Transportation, Maritime & Port Industries. Congratulations Amit on your new position!

Send us your Email address!

We are working to go paperless for our Quarterly Updates. If you are currently receiving this in paper format, please send your email address to:
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Key Outreach, Events, Presentations, & Meetings

- Dr. Stewart, Ms. Wolosz and LCDR Coleman met with Chart Industries. New Prague, MN. 8 Jul.
- Dr. Mokashi, Ms. Roemhildt and two student research assistants attended the Alternative Fuel Roadshow put on by the Minnesota Propane Association at the Duluth Entertainment Convention Center. There was a display of propane fueled vehicles and six guest speakers. Duluth, MN. 21 Jul.
- Ms. Wolosz participated in the MARAD META Workshop via teleconference. 22 Jul.
- Ms. Wolosz participated in the Ship Operations Cooperative Program's Summer Workshop via teleconference. 22 Jul.
- Dr. Stewart and Ms. Wolosz had a teleconference meeting with natural gas developers on siting and demand for the Twin Ports. 31 Jul.
- Dr. Stewart met with Mr. Steve Fisher, Executive Director for the American Great Lakes Ports Association. Duluth, MN. 7 Aug.
- Dr. Stewart was a guest speaker at the 3rd Annual Wisconsin Global Trade Conference. Sheboygan, WI. 24 Aug.
- Ms. Wolosz attended the Wisconsin Clean Cities Natural Gas Forum. Mequon, WI. 25 Aug.
- Ms. Wolosz participated in the Wisconsin Commercial Ports Association Meeting. Port of Milwaukee, WI. 27-28 Aug.
- Ms. Wolosz met with Dr. Art Sulzer, appointed Advisory Board Member from the St. Lawrence Seaway Development Corporation (SLSDC), and provided a tour of the Twin Ports and North Shore shipping industry facilities. 30 Aug and 1 Sep.
- Dr. Stewart and Ms. Wolosz met with the SLSDC staff members and Board of Advisors. Dr. Art Sulzer (SLSDC board member) and Dr. Stewart provided a session on Transportation Education Programs to the staff and board members, along with Duluth port and public school representatives. Duluth, MN. 31 Aug.
- Ms. Wolosz and Ms. Roemhildt attended the Duluth/Superior Harbor Technical Advisory Committee meeting. Mr. Ben Zeitlow from the Center for Freight and Infrastructure Research and Education presented on port planning, including the outcomes of GLMRI Port Planning Benchmarking Study prepared by Dr. Stewart, Ms. Libby Ogard and Ms. Roemhildt. Superior, WI. 2 Sep.
- Ms. Wolosz and Ms. Roemhildt met with Mr. James Stemwedel, ABS Surveyor to discuss GLMRI LNG research. Superior, WI. 4 Sep.

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