Industrial Power Systems, Inc.
Designers & Manufacturers of Electrical Controls, Switchgear & Automated Systems
Established 1981

NEWS from IPS

Martinac Shipbuilding reports IPS-designed switchboard is an electric plant "technical marvel" for Signet Maritime's new Z-drive escort tug boats America and Pacific Star

Industrial Power Systems, Inc.'s innovative power management system "solves a notorious problem encountered in the design of electric plant on tug boats", says Martinac's chief electrical designer, Gary Farrell.

August 7, 2008 – Owners and operators of new state-of-the-art tug boats recently built by J.M. Martinac Shipbuilding Corp. of Tacoma, WA, are collectively praising the innovative electrical control system designed and built by Industrial Power Systems, Inc., (IPS) of Jacksonville, Florida (www.ipsswitchgear.com).

Built for Signet Maritime (Houston), the new $12 million Z-Drive "tractor tugs" *America* and *Pacific Star* are leased to Foss Maritime (Seattle) for its ship assist and tanker escort business. The second vessel, *Pacific Star,* was handed over by the builder J.M. Martinac Shipbuilding Corp. in June.

Industrial Power Systems, Inc. was asked by Martinac to apply their controls wizardry to design and build generator power management systems for the new state-of-the art Z-drive tugs. The result is a "technical marvel" that "solves a notorious problem encountered in design of electric plant on tug boats", says Gary Farrell, Martinac Shipbuilding's chief electrical designer.

Ship service generators, operating 24/7, should be sized to work at their highest continuous load levels. This translates into better fuel economy and improved O&M (Operations and Maintenance) costs for the owners. But tugboats are far more demanding applications. The normal ship service load on the tugboats America and Pacific Star is 70 kW. However, for just 15 minutes every day they each operate a 56 kW hawser winch. A generator sized for both loads would provide ideal operating conditions only 15 minutes each day, and 55% full load for the rest of each day – severely compromising fuel economy and long-term O&M costs.

To resolve the generator-sizing dilemma, IPS's challenge was to design and build a fully-automatic power management system to operate a 99 kW generator at optimal 70%+ load factor all day and automatically load-share with a standby 99 kW generator to power the hawser winch and all necessary loads during winch operations. And in the event that the 2nd generator is not available automatically shed preselected loads to power the hawser winch when required.

Delivered on schedule, IPS's innovative power management system is what Mr. Farrell terms "a technical marvel … the customer is absolutely thrilled with the switchboard and all the tricks it can do, and the Foss engineers who are operating the first vessel think it is the neatest thing since sliced bread."

Joe Dahl, formerly Signet Maritime now general manager of production at Martinac, said "I've never seen anything like it before. I used to work on a dredge and we'd have to wait to manually synchronize a second generator and add loads before doing the job the IPS switchgear does seamlessly and automatically, even with one generator."

Joe Martinac, president of Martinac Shipbuilding said the power management system is "Nicely engineered system that works like a charm, and we got great support from IPS."

NOTE: The full text of Gary Farrell's testimonial with specific application details can be found on the IPS website.

NEW BUSINESS

In addition to these successful installations, other current and recent IPS marine projects include supplying switchgear and electrical control systems for:

- Argosy Casino, Lawrenceburg, Indiana – Design by Lay Pitman Associates. General Contractor is Messer Harmon, LLC. Electrical Contractor is Mayer Electric.

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- Moran Towing tugs built by Washburn & Doughty Associates, Inc.
- New York Water taxis built by Gladding-Hearn Shipbuilding
- OSG 8000 HP tugs built by Bender Shipbuilding and Repair Co., Inc.
- OSG 12000 HP tugs built by Bender Shipbuilding and Repair Co., Inc.
- OSG 645k bbl barges built by Bender-Tampa Bay Shipyard
- US Shipping tugs built by Eastern Shipbuilding Group
- McAllister tugs built by Eastern Shipbuilding Group
- Moran Towing tugs built by C&G Boat Works
- Reinauer tugs built by SENESCO
- Boston Towing tug built by Derecktor Shipyards
- Cruiseship built by Chesapeake Shipbuilding
- Seaspan tug built by J.M. Martinac Shipbuilding
- 120', 135', and 150' luxury yachts built by Palmer Johnson

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ABOUT IPS

Industrial Power Systems, Inc. (IPS) is a Florida corporation established in 1981 by Bill Young, President and Chief Technology Officer of the company. IPS designs and builds quality electrical controls, switchgear and automation systems for marine and industrial applications. Specialists in custom design and fabrication, IPS offers both bid-to-specification, and design-and-build products. The company's manufacturing, engineering, sales, administrative and corporate offices are located in a 20,000 square foot facility in Jacksonville, Florida.

IPS builds to meet standards of all major USA regulatory bodies and associations including EGSA, IEEE, NEMA, NEC, UL, and ANSI for land applications, and ABS, USCG and IEEE for marine applications. IPS also builds to meet international standards including CSA, IEC and other regulatory and classification societies including Lloyd's, Transport Canada, and Det Norske Veritas for marine applications.

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