engineering for a better world

PRESS RELEASE

Digital control generation GEA IO: fit for tomorrow's autonomous shipping

Efficient separator management for fuel, lube oil and water treatment

- Optimized control generation – suitable for use in unmanned autonomous shipping
- Control panel with self-explanatory touch screen operation
- Best separator work mode can be chosen by pushing one button
- Remote-capable control for remote monitoring, control and maintenance
- High machine-optimization potential for many different usage scenarios
- Seamless integration as sub-system into central digital ship control systems
- Wide range of assistant systems and efficiency programs

Düsseldorf (Germany), September 6th, 2016 – Merchant vessels, ferries and cruise ships – in times of volatile markets with continually increasing cost pressures, ship operators and technical managers are looking for efficient technologies for more economically efficient operation of their fleets. GEA offers a solution with high future potential with the new control generation GEA IO, presented at the Marine specialist trade fair SMM 2016 in Hamburg (6 to 9 September). GEA IO optimizes separator use for increasingly demanding requirements to economic and ecological fuel, lube oil and water treatment on board. "The strength of GEA IO is in its flexibility with which users can adjust the operation of the GEA separators to the current requirements: Pushing a button is all it takes to, e.g., switch between maximum yields or performance and minimized energy consumption or use of auxiliary equipment," explains Dipl.-Ing. Sven Jadzinski, Senior Product Sales Manager at GEA. "The IO control adjusts the centrifuge to the desired condition automatically." GEA IO is operated by a touch screen interface that is self-explanatory and intuitive for the user – or optionally by remote access via tablets or PCs.

GEA IO – fit for the future of unmanned operated ships

With the IO control, GEA is also ready for an important subject of the future of shipping: autonomously operated ships without crews. The ship is controlled by a central digital control unit on board, supported by subsystems such as the GEA IO. The first prototypes have already successfully completed their test runs. One essential benefit: Without the crew, at least 20 percent of the current operating costs will be saved by the removal of payroll costs – a central factor for pricing in particular in merchant shipping. The required safety will be ensured by a control center on shore: A team of operators will continually monitor the unmanned vessel by satellite communication. If necessary, he can also take over control.

GEA Group Aktiengesellschaft
Phone +49 211 9136-1492 · Fax +49 211 9136-3-1492 · gea.com
Peter-Müller-Str. 12, 40468 Düsseldorf, Germany

PRESS RELEASE

Reliable interaction between the digital systems

The technical future scenario looks as follows: The autonomously working digital control system ensures fully automatic self-control of the ship via a sensor network. Smooth operation depends on interaction with reliably working subsystems, e.g. for navigation and power management. The remote-capable GEA IO control can be perfectly integrated into the separator-based fuel, lube oil and water treatment here. For example, catalyst residues (Cat Fines) which are dangerous for engines will be separated from the HFO to ensure high fuel quality with less than 3µm particles for stable and continuous operation.

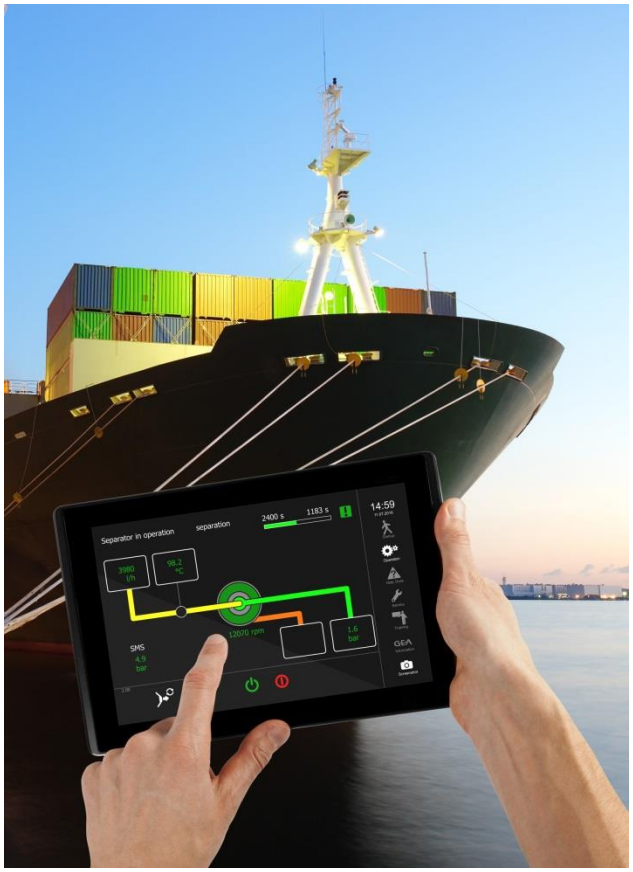
Remote-capable control, monitoring and maintenance

The IO-control offers even more options with its wide range of assistance systems and efficiency programs: Its remote capacity with condition monitoring and diagnosis tools permits simple, quick and safe remote maintenance of the separators from shore. Evaluation of the system and operating data that are collected online can identify optimization potentials for future deployment scenarios, e.g. to minimize energy consumptions in a cost-saving manner. The benefits of installing the centrifuge and control as a complete solution from GEA are evident here: Flexibility and efficiency in on-board operation increase, as does process safety. This results in sustainable fleet management with clearly reduced operating costs and downtime.

"By linking the ship technology with digital information and control systems such as GEA IO and integrating them into superordinate systems, including big-data technologies, we have completed our successful entry into tomorrow's autonomous shipping," says Sven Jadzinski. "As one of the leading marine system providers, we traditionally cooperate closely with the classification companies, engine manufacturers, design institutes and shipyards in this area as well." In alignment with this, GEA is planning to introduce a new centrifuge generation on the market in 2017. It is to offer a revolutionary drive concept – with the IO touch panel as the ideal control tool.

GEA Group Aktiengesellschaft
Phone +49 211 9136-1492 · Fax +49 211 9136-3-1492 · gea.com
Peter-Müller-Str. 12, 40468 Düsseldorf, Germany

PRESS RELEASE



Corporate Media & Press:

Lilian Schmalenstroer

Peter-Müller-Str. 12, 40468 Düsseldorf, Germany

Phone: +49 2522 772174

lilian.schmalenstroer@gea.com

In case of publication, please submit two copies of each of the published items for our archives.

About GEA

GEA is one of the largest suppliers for the food processing industry and a wide range of process industries that generated consolidated revenues of approximately EUR 4.6 billion in 2015. As an international technology group, the Company focuses on process technology and components for sophisticated production processes in various end-user markets. The Group generates more than 70 percent of its revenue in the food sector that enjoys long-term sustainable growth. As of March 31, 2016, the Company employed over 17,000 people worldwide. GEA is a market and technology leader in its business areas. The Company is listed in Germany's MDAX (G1A, WKN 660 200). In addition, GEA's share is a constituent of the MSCI Global Sustainability Indexes. Further information is available on the Internet at gea.com.

If you do not want to receive any further information from GEA, please send an email to pr@gea.com.