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PRODUCT NEWS

RESETTING OUR BEACONS

In this period of great changes and challenges in the way we live and work, we were able to excel in the Marine business, thanks to our determination to provide excellent and innovative products and services.

This accomplishment has been realized with your help and demonstrates our mutual commitment.

It is more important than ever to stay connected.

For this year we are focusing on the release of the 350–500 kW IMO Tier III and on total onboard power solutions (TOPS).

In addition, we are developing a new brochure that will combine commercial and pleasure craft into one brochure.

We will also focus on social media and digital meeting tools to help improve brand awareness and strengthen your business.

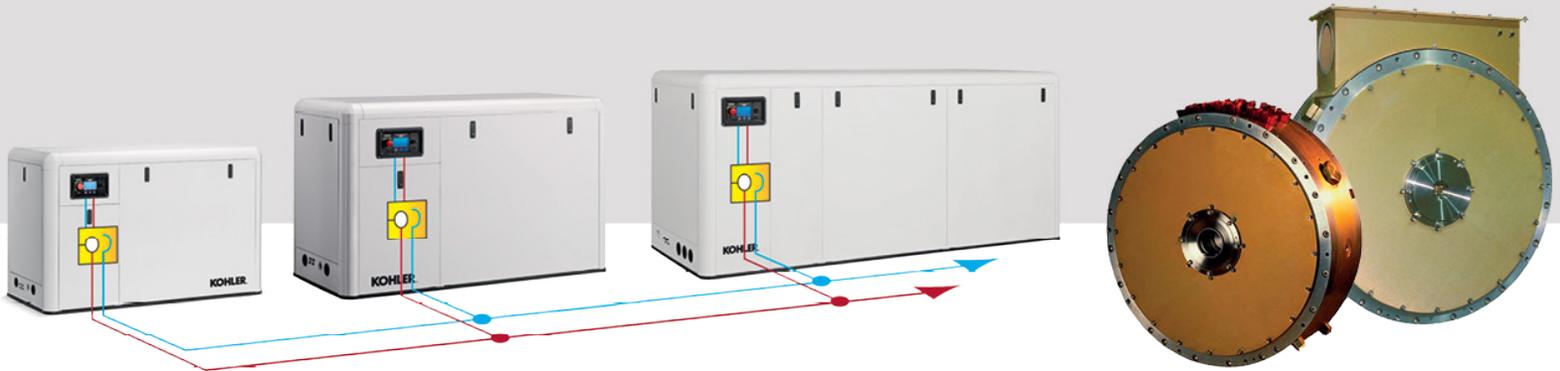
Thank you for your commitment to KOHLER®.

Take care and stay healthy,

Jos Raats



Photo: The new Formula 500 Super Sport Crossover has a KOHLER 16 kW diesel generator with sound shield on board.



TOPS: COMBINED ENGINEERING INTELLECT OF KOHLER AND LEONARDO DRS

TOPS stands for total onboard power solutions and offers the OEM a wide selection of power generation, power conditioning, as well as power management and controls to handle all onboard power needs.

Kohler and Leonardo DRS, both cutting-edge industry power system partners, provide advanced propulsion system configurations that would include hybrid-electric drive (HED) to provide a more pleasurable experience for the customer while reducing environmental impact.

Low-speed cruising under electric propulsion provides the quietest and most fuel-efficient operation, while minimizing emissions that can be reduced to zero in port if an energy storage system is included.

Economic benefits are derived from load-leveling, peak-shaving, and spinning reserve functionality. With an energy storage solution, the generators can be smaller sized or fewer in number to handle the base load.

The system can shave the peaks or level the load on the generators to reduce fuel consumption, emissions, wear and tear, and maintenance on the engines, and spinning reserve will improve propulsion response time and provide backup power. The main diesel engines can be used for high-speed transiting with regeneration functionality. The system will seamlessly shift between modes, based on the power and operating demands, and provide the following benefits:

- Maximized fuel economy, leading to lowest operating costs and maximum range
- Silent operation under electric drive
- Zero emissions under electric drive in port
- Minimized stress on the propulsion components, leading to reduced maintenance and replacement costs
- Increased redundancy in the propulsion system
- Reduced generator acquisition cost

Please reach out to your area manager for more information. ■

STATE-OF-THE-ART ENGINES FOR FRONT-EDGE MARITIME TRAINING

At Lindholmen's technical high school in Gothenburg, the mechanics and repairmen of the future are trained. In the school's machine lab, specially equipped ship engines with state-of-the-art emission control provide students with unique opportunities to gain hands-on experiences in maintaining, troubleshooting, and repairing engines under realistic, but supervised, conditions. Diesel Power was entrusted to supply and install the equipment.

The requirements of the procurement were demanding—both on the equipment and on the supplier's competence. The goal was to create a machine lab placed on dry land where engines can function and students can work exactly as if they were in a real ship environment.



Carl Rapp, Service Manager at Diesel Power, tests the generator units in the school's machine hall.

Service-friendly KOHLER® generator units

The main equipment in the machine lab are two generator units from Kohler, which are normally used to generate electricity on ships.

Each cylinder has a separate cylinder head, which is an advantage in teaching, and the generator units are started with different types of ignition: one has an electric starter and the other has been equipped with an air starter from Gali. This allows students to learn how to handle both start-up methods. The engines can run at full charge in the lab.

KOHLER paralleling generator engine node (PGEN) system

The engines are equipped with the KOHLER PGEN paralleling system. The PGEN connection parallels up to eight KOHLER generators of varying sizes with a single communication wire.

When the first generator's load is light, the second generator automatically drops off. When the load is heavy, the second generator automatically comes online to provide the power needed to carry the load.

The KOHLER PGEN system saves cost, space, weight, and consequently fuel, and is approved by leading agencies. It replaces the synchronising switchgear panel so multiple generator sets work as one automatic system.

By reducing the number of connections, reliability and redundancy increase. Load management reduces the risk of dead ship from overload. This optimises generator set performance and minimises running hours, which also saves maintenance costs. If less or smaller units can take the load, they will.

With the future in mind

EcoPar, used as a fuel for the machines, is a very clean fuel based on synthetic paraffin oils. EcoPar is free from both sulfur and aromatic hydrocarbons, and thus smells much less than standard diesel which results in a good working environment in the lab.

Compared to conventional diesel, the climate impact is also reduced: carbon dioxide emissions are halved and nitrogen oxides (NOx) levels are reduced by up to 60 percent. The engines are filled with fuel from a day tank, which holds the fuel consumed during a day in the machine lab, and the day tanks are refilled from a larger storage tank.



AdBlue finishing for minimal emissions

The engines are equipped with an advanced exhaust aftertreatment system that meets industrial EU Stage 5, the emission requirements which are significantly stricter than those applied at sea.



A carefully collaborated dose of AdBlue breaks down nitrogen oxides into harmless water vapour and nitrogen.

The low emission levels are achieved through selective catalytic reduction (SCR), where AdBlue is added before the exhaust gases reach the catalyst. AdBlue is a mixture of water and urea, a nitrogenous and completely harmless chemical compound also known as a urine substance.

The liquid helps to break down the harmful nitrogen oxides in the exhaust fumes to water vapour and nitrogen. NOx emissions do not exceed 0.4 g/kWh and the post-treatment also reduces the amount of soot particles by 98 percent.

High-level cooling

The cooling water from the engines is pumped up onto the school roof, where the heat is emitted 26 meters above ground level.



Carl Rapp, Service Manager at Diesel Power, takes a breath of air among radiators and fan air coolers on the school roof.

Motor paws vs. concrete slab: 1-0

On board a cargo ship, engine vibrations tend not to be a major problem for the crew. But located on a property, noise and vibration can resonate in the building in a disturbing way.



On the school roof a load bank is installed, which is an electrical load resistance that generates heat energy.

Since the base foundation in the machine lab was not suitable for ship engines in operation, Diesel Power developed a solution based on vibratex engine paws that effectively isolate the vibrations. ■



In the machine hall there are noises, of course, but the motor paws from Vibratex make sure that students in other parts of the school can concentrate on their studies.

Want to know more about this installation?

Please contact Carl Rapp,
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NETWORK DEVELOPMENT

We are happy to announce that we expanded our distribution network with:

- **Divisão Peças e Serviços Ltda, Brazil,** covering north Brazil
- **I-Sea Group, Brazil** covering southeast and midwest Brazil
- **Antilles Power Depot, Puerto Rico** covering Puerto Rico
- **Trimer US LLC,** covering Argentina
- **Korindo Energy, Singapore** covering Indonesia
- **Interstate Power Systems, US** covering the upper mid-west territories

Welcome aboard! ■



Congratulations and thank you to U.K.-based Atlantis Marine Power Ltd. on more than 25 years as our distributor! ■



SPIDER WORKWEAR INTRODUCTION

Spider Werkkleding is a Dutch company lead by brother and sister Thijs and Janneke Schreurs. They are specialists in the production and delivery of work clothes in all sizes.

They have their own factory with a textile printing and embroidery workshop integrated. They make high-quality work wear that is comfortable, sturdy, and fits well. The collection consists of work trousers, overalls, T-shirts, vests, etc. and is available in multiple colors.

Ordering Kohler branded workwear from a European company saves you on customs and shipping costs versus ordering from the U.S. Pricing is competitive. ■



Please have a look at the site www.spiderwerkkleding.nl/webshop. Use log-in password Spider-Kohler100.

Feel free to order. Payment is by credit card.

The link to this website can also be found on the KPRC portal.