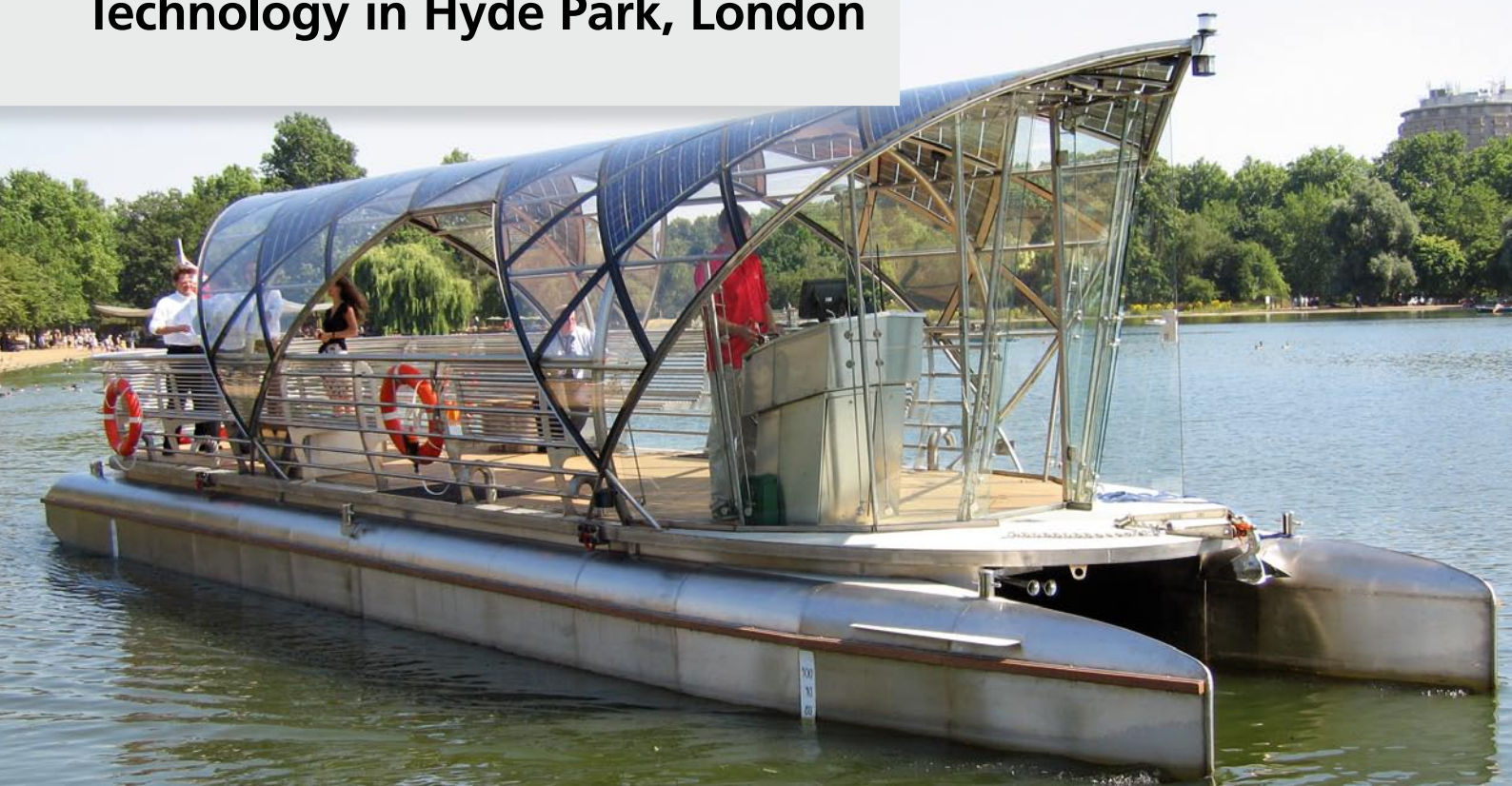


Solar-Powered Boat with Moeller Technology in Hyde Park, London



Green spaces with inland waterways are not only sensitive ecosystems but are also recreation areas and tourist centres. This also applies to Hyde Park, one of the most popular royal parks in London. In order to offer tourist attractions such as boat tours on the park's Serpentine Lake an entirely new drive concept was needed. Sustainable and regenerative energy were selected as the preferred source of power. The innovative boat that virtually glides through the water silently and emission free uses solar technology and Moeller products.

THE COMPANY

Kopf is a family-run company that was founded in 1930 and is based in Sulz (Neckar). It has a reputation worldwide as an innovative company in the field of environmental and energy technology. In 1975, the company entered the solar energy sector as Kopf AG and in 1996 developed the first solar-powered boat in collaboration with Stuttgart University and the designer Christoph Behling. Kopf Solarschiff GmbH was founded in 2005 for the manufacture and distribution of solar-powered boats. Since then over 45 boats of different sizes have been supplied worldwide - with solar-powered and electric drives, fuel cells or hybrid drives. www.kopf-solarschiff.de



London now has a new jewel: the RA 46, the new solar-powered boat from Kopf Solarschiff GmbH, cruises Hyde Park's Serpentine Lake. Peter Scott, the proud owner of the RA 46, is the boss of Blue Bird Boats Ltd. He hires out boats for tours and charter trips on Hyde Park and has now added the solar-powered boat to his fleet. Only something exceptional could be used for one of the eight royal parks: thanks to the designer Christoph Behling, the solar-powered boat not only stands out in terms of its functionality but also in terms of its aesthetic design. The catamaran type solar-powered boat is 14.3 metres in length and can take up to 40 passengers. With its unique curved glass solar modules the solar generator can supply up to 2 kW of electric power. The two hulls designed by marine engineer Klaus Röder and the two state-of-the-art three phase drives with a total output of 20 kW enable the boat to reach speeds of around 15 km/h.

The solar-powered catamaran is controlled using innovative Moeller technology. The MFD-Titan multi-function display from the easy series enables all the required operating states to be visualised and controlled without using any expensive touch display solutions. The front, with a high level of protection to IP65, and the wide operating temperature range from -25°C to 55°C make the MFD-Titan also suitable for outdoor environments such as on a boat's control console. The compact MFD-Titan offers an outstanding level of reliability, durability and cost efficiency.

The RA 46 uses three MFD-Titans, each with easy618 remote I/O expansions. The Screen Editor of the easySoft programming software integrates a number of predefined screen elements, enabling users to rapidly create visualisation pages for displaying the various operating states of the solar-powered boat. An easy800 control relay is used as the central controller. Kopf Solarschiff was delighted by

how easily the MFD-Titan could be networked with easy800 and the flexibility of control which could either be implemented via a single device or distributed over several MFDs.

The three multi-function displays show the following operating states:

MFD1:

Alarms and acknowledge signals

- Board control: Status of the 12V/24V board batteries, Date - Time - System Check,
- Bilge alarm: Display of bilge water alarm for port and starboard hulls,
- Alarm for starboard / port drives,
- Monitoring of the fan in the battery compartment,

Control and operation

- Control and operation
- Navigation lighting (top and position lights for port / starboard, aft and anchor light),
- Measured values for board battery 12/24V
- Control console and deck lighting,
- Effect and float lighting,
- Screen wipers, heating, pigeon deterrent, overhead monitors, background lighting,
- Steering for the port and starboard hydraulics,
- Immobilizer.

MFD2 port drive and MFD3 starboard drive

- Measured values (motor speed and port shaft), voltage / current / temperature drive battery 96V,
- Button for bilge pump,
- Status of charging device for drive battery,
- Display for current - solar charging regulator - 24V board battery.

The easy800 central controller controls the hydraulic pumps of the starboard and port rudders, the fans for the battery compartment, as well as the heating and the backlight of the buttons on the control console. In easySoft's graphical editor, users can choose the contacts and coils using "drag & drop" and connect them at the click of a mouse. The program created in this way is stored retentively in the devices without the need for any auxiliary power supply or battery.

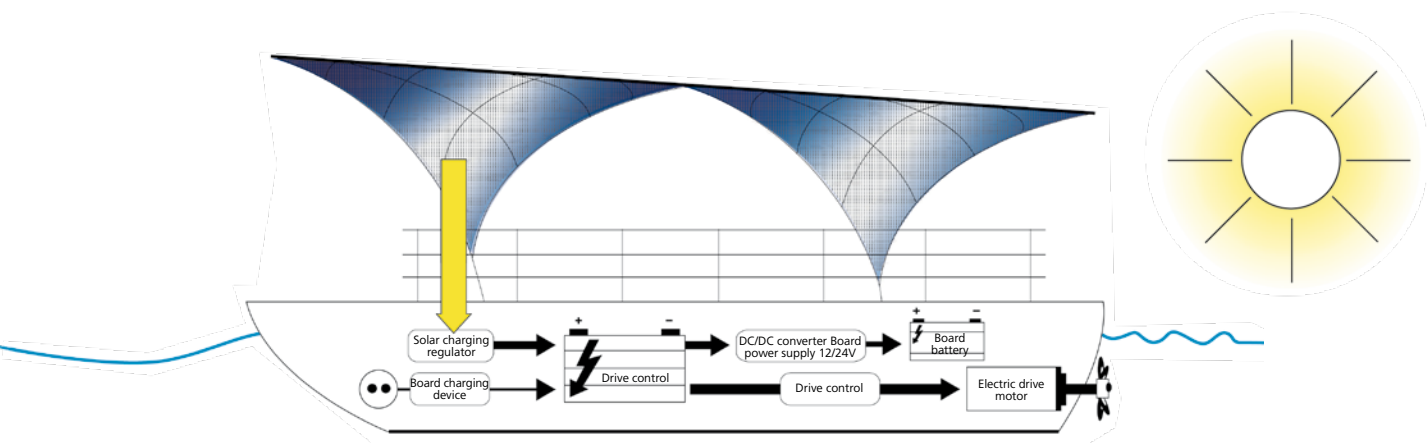
This application impressively demonstrates the versatility of the easy control relays. However these devices can be used in maritime engineering for far more than the innovative solar-powered boat concept. easy devices have been approved by a large number of classification societies such as GL (Germanischer Lloyd) or LR (Lloyd's Register of Shipping).

Quicklink ID:

MS1413

CONCLUSION

Bernd Knöpfle, project manager for marine electronics at Kopf Solarschiff GmbH summarised as follows: "With MFD-Titan we are now able to implement an inexpensive and customised visualisation system on smaller boats as well. The easy to handle programs enable us to meet the special requirements of our customers cost effectively. Thanks to the wide range of easy components in easy's product portfolio we are also able meet the requirements of complex control tasks."



Moeller GmbH
Hein-Moeller-Str. 7-11
53115 Bonn
Fax: +49 (0)228 602-2275
E-Mail: info@moeller.net
Internet: www.moeller.net

MOELLER

We keep power under control.