

# SEA TECHNOLOGY®

An aerial photograph of a long bridge spanning a wide river. The image is overlaid with a colorful bathymetric map, where different colors represent different depths and underwater features. The bridge is shown in a light blue color, and the riverbed is depicted in various shades of green, yellow, and red. The surrounding land is shown in dark blue and black.

[www.sea-technology.com](http://www.sea-technology.com)

FEBRUARY 2020

**Instrumentation:  
Measurement  
Processing &  
Analysis**

**FEATURING:  
Single Supplier for Surveys  
Environmental Telemetry  
Sound-Speed Profiling**

### Fire-Suppression System

3M Novac 1230 at 725 psi (50 bar) is U.S. Coast Guard approved. The fully customizable MN-Series provides greater flexibility when designing or retrofitting a vessel's fire-suppression system and is ideal for commercial or recreational vessels up to 300 ft. Sea-Fire Marine.

### Micro Inspection Skid



A new laser survey skid for inspection-class ROVs developed in partnership with iXblue and Nortek delivers high-accuracy inspection capabilities with subsea dynamic laser scanning to enable survey and inspection by low-cost vehicles. The ViewLS data module enables users to easily combine navigation and laser data and extract targets of interest into third-party point cloud analysis software. 2G Robotics Inc.

### Offshore Connectivity

Reducing weight and space by up to 60 percent, the fire-resistant RADOX OFL (Oil & Gas Flexible Lightweight) cable solution has a small bend radius and thin wall that makes installation easier and quicker. This could save industrial and offshore facilities several hundred thousands of dollars in structural design. HUBER+SUHNER.

### Shallow-Water Push Boat

Powered by two MTU 8V4000M-55RN natural gas engines and designed for use on inland waterways, the push boat is more cost-effective to operate and produces less pollutants and exhaust gases than vessels with conventional propulsion systems. Rolls-Royce Power Systems AG and Robert Allan Ltd.

### Subsea Hydraulic Power Units

A new range of SHPUs comes with integrated hydraulic system components and functionalities such as

pressure compensation, filtration, controls and instrumentation. It is suitable for subsea installation tooling and subsea dredging systems. Seatools BV.

### P-Clamps

Engineered with separate lock and mounting features that offer engineers the flexibility to rethink the way electrical and fluid systems are configured, P-Clamps can be installed earlier in the assembly process compared to standard AS21919 P-Clamps. They eliminate the need for tools and hardware when installing cable assemblies. TE Connectivity Ltd.

### ROV Power Supply

Powering through the tether cable, the Outland Technology Power Supply (OTPS) for the BlueROV2 eliminates the need for batteries. OTPS transfers the power at a high voltage and low current, minimizing power losses through the tether. Outland Technology Inc. and Blue Robotics Inc.

### All-Black Antenna Line

Whether for tactical purposes or simply to match a boat's decor, the all-black Full Stealth line of antennas, mounts and cable delivers quality and performance in a sleek modern package. The VHF and AM/FM versions are offered in 4- and 8-ft. lengths. AirWave Marine.

### Used Oil Analysis IT Platform

The LubeAnalyst next-generation platform offers a much simpler sample management process, which includes online sample registration and label printing. This helps to minimize the likelihood of errors. Shell Marine.

### Magnetron-Free Radar

For the first time, a magnetron-free Commercial Radar/Chart Radar solution is now available in both X-band and S-band. No magnetron means less power consumption, as well as no consumable part. Solid-state NXT radars are both powerful and eco-friendly. FURUNO USA Inc. **ST**



## REDEFINING THE WAY THE WORLD WORKS AT SEA

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pened spontaneously, rather than being a consequence of biological or tectonic revolutions. The study, presented at AGU's Fall Meeting and published in the journal *Science*, shines a light on the history of oxygen on Earth and gives new insight into the prevalence of oxygenated worlds other than our own.

The early Earth had no oxygen in its atmosphere or oceans until roughly 2.4 billion years ago when the first of three major oxygenation events occurred. The reasons for these stepwise increases of oxygen on Earth have been the subject of ongoing scientific debate.

In the new research, scientists modified a well-established conceptual model of marine biogeochemistry so that it could be run over the whole of Earth history and found that it produced the three oxygenation events all by itself. The model demonstrates that a gradual oxygenation of Earth's surface over time should result in distinct oxygenation events in the atmosphere and oceans, comparable to those seen in the geological record.

The new findings suggest that beyond early photosynthetic microbes and the initiation of plate tectonics—both of which were established by around 3 billion years ago—it was simply a matter of time before oxygen would reach the necessary level to support complex life.

This new theory drastically increases the possibility of high-oxygen worlds existing elsewhere.

### Wirewalker, Current Profilers Reveal Ocean Processes

Paired with Nortek current profilers, Del Mar Oceanographic's Wirewalker is giving researchers a cost-effective way to answer vital questions about ocean processes. This helps improve environmental monitoring and climate forecasting, which assist in developing climate adaptation measures.

Powered by wave energy captured by a float at the surface and a weight suspended in the water column on a suspension wire, the Wirewalker propels itself down the wire to the desired maximum profiling depth and records data from the attached instruments as it slowly returns up the wire to the surface.

Since development began in 1998, researchers at Scripps Institution of Oceanography have paired the Wirewalker with several instruments, including Nortek's Aquadopp and Signature current profilers, which have provided critical, high-resolution measurements of current velocity.

### CSIRO Orders Coring System

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) in Australia has purchased a 24-m Giant Piston Corer from OSIL for the RV *Investigator*. The modular deep-sea sediment coring system comprises four 6-m-long barrels, a stainless-steel head with removable lead weights, and a mechanical trigger arm with 1-m-long pilot core. The system has been specified with deck stands, deck storage for the head and barrels, and tools and spares.

The Giant Piston Corer can achieve recovery rates of over 95 percent in soft sediments. **ST**

Oceanology International  
17 - 19 March 2020, London  
Stand C700



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**pCO<sub>2</sub>**

General Oceanics, Inc. introduces its **new model 8050 autonomous pCO<sub>2</sub> monitoring system**. Continuous measurement, recording and transmission of sea surface CO<sub>2</sub> levels.

- **Efficient equilibration of sea water and confined air head space.**
- **Infrared analysis of CO<sub>2</sub> concentrations.**
- **Automatic calibration.**
- **Integrated computer and control software.**
- **Integrated GPS location and atmospheric conditions.**
- **Satellite data transmission.**

<http://generaloceanics.com/home.php?cat=69>

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