

Track record

After his advanced gas monitors won two prestigious awards at METS and IBEX, Shane Faulkhead's company EVRSafe has had to battle hard to keep up with demand. Despite this he has already decided to launch a newer — even more sophisticated — version. **DENNIS O'NEILL** reports.

When the EVRSafe ISS-1040 was introduced in 2007 it was immediately recognised as being a remarkable marine gas detection system with its ability to detect and measure concentrations of carbon monoxide, butane, propane, nitrogen dioxide from diesel exhaust, hydrocarbons — and smoke from any sort of fire regardless of source.

Apart from having a straightforward audio-visual alarm, the ISS-1040 could identify which type of gas had been detected, its concentration, and whether that level was increasing or decreasing.

It could then also automatically start fans and pumps to remove the offending substances or operate a shut-off valve.

"The response from the international marine industry was phenomenal," says Shane Faulkhead, founder of EVRSafe Marine Technologies of Australia, who previously worked as a consultant in the defence industry where he designed pressurization systems for planes and helicopters.

"We had a tremendous response from boatbuilders and we weren't too surprised when the aviation industry also started to take serious interest. Now we have even been

approached by international utility companies and US government departments who are looking to use the ISS-1040, and its software, to monitor their pipelines and facilities.

"We are securing agreements with these departments, which means we have been able to develop a number of specially designed new products."

The enormous success of the ISS-1040 means that EVRSafe has been able to begin a major expansion of its facilities in order to increase production to cope with demand — especially Europe.

Faulkhead has also been approached by a number of fire-control system manufacturers to apply the ISS-1040 technology to fire management systems — which should also benefit boatbuilders.

"This is an exciting step as it will give us the ability to develop the product for use on large superyachts and shipping control rooms," he says.

Security tracking

And now interest has been re-ignited with Faulkhead's latest version of the product — the ISS-1040 Traker — which includes a

sophisticated tracking system.

The essential toxic gas detection system is still in place. Sensors are installed in various locations on a boat — for example the helm, engine room, galley or bedrooms — and all are connected back to the central processing unit (CPU), which has LCD displays giving readouts from each sensor.

"The processor is comparatively sophisticated in relation to other systems on the market," explains Faulkhead. "Once a toxic gas has been detected, the ISS-1040's CPU alerts the crew and passengers — via audio and visual displays, where the gas has been detected before it can reach dangerous levels. The type of gas detected is also displayed on the LCD display, with the levels in parts per million. It also indicates whether the levels are increasing or decreasing. The EVRSafe ISS-1040 CPU can audibly warn the crew with spoken commands, instructing them to open specific hatches or vents to remove or disperse harmful gases. If contamination increases to dangerous levels, the CPU is also able to switch external equipment, such as generators, fans and pumps, on or off to bring air quality back to acceptable levels.

"The system is capable of logging data for up



The EVRSafe 1040 Traker works as a GPS tool, using satellite technology to provide real-time positions.

"Carbon monoxide is a tasteless, odourless and colourless gas that is hard to detect — and potentially lethal."

to six months, so that gas leaks can be monitored and recorded long-term, which is particularly useful when it's time to service a boat. If there is a worsening exhaust leak, for instance, it can be detected and fixed during the boat's next service."

The new EVRSafe 1040 Traker works as a GPS tool, using satellite technology to provide real-time positions of a craft anywhere in the world. It provides owners with automated notification via a secure web server, SMS or email whenever the boat moves. It can even keep tracking when the vessel is in an area where the cellular signal is intermittent or non-existent.

"The main advance with this new product is that now, not only does it work as an integrated toxic gas detection system, but it has the ability to contact your mobile phone if a problem occurs onboard while you are away," he explains. "And now — to help even further with security — it also incorporates a new

tracking device which gives a positional report of your vessel."

Detecting dangers

But it is still the advanced detection aspect that will continue to underpin the success of the EVRSafe unit.

Because carbon monoxide is a tasteless, odourless and colourless gas it is notoriously difficult to detect and potentially lethal. It weighs about the same as air and therefore doesn't rise or fall like other gases and can accumulate in dangerous levels on, or near, an anchored, idling or slow-moving vessel.

Exposure can cause brain damage or even death.

In certain circumstances, carbon monoxide is able to enter a boat through the aft of the cockpit — a phenomenon which is known as the 'Station Wagon Effect'.

The shape of the hardtop can lead to an area

of low air pressure directly behind the boat and in the cockpit. Exhaust gases from the engines can be drawn into the cabin or cockpit area depending on wind conditions, boat speed and trim angles.

Inefficient trim levels can increase the amount of CO produced by the excessive engine loads.

The ISS-1040 has been introduced to work on power and sail craft of any size.

The sensors are flush mounted within the hull design. They can also be mounted on a bracket.

Each unit can have up to 130 sensors connected and it only requires a 51mm diameter aperture to take five communication cables between the sensors and the central processing unit (CPU).

It is available in a number of different languages including English, French, Italian, German and Greek. Other language options are available on request.

EVRSafe Marine Technologies offers a one-year, unconditional warranty that covers manufacturer's defects.

The sensors need to be calibrated and tested every two years by an authorised service provider.