

Solving confined space monitoring with innovation

United Safety

One of the most daunting tasks in the course of a turnaround is ensuring employee safety during confined space work. For the longest time, plant managers have had to deal with breathing air delivery systems that were not flexible enough to respond to their scope of work. As a result, more equipment was required to monitor the activity, such as individual air cylinders and regulators that make workspaces crowded and require frequent timeouts to replace equipment as breathing air was consumed.

An opportunity to innovate arose when an oil and gas operator planning a turnaround of its base plant brought the challenge to United Safety. Workers were to perform high-risk tasks in confined spaces under breathing air where their breathing activities were to be monitored at all times. It was crucial to provide the ability to immediately identify abnormal breathing patterns before the situation could turn life threatening. The hurdle was no line of sight to the workers was possible and traditional methods were cumbersome.

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— Shayne McCallum,
United Safety

“When challenges arise, United Safety looks at it as an opportunity. Our research and development team captures the details, the results they would like to see and finds solutions to improve existing processes. This is how we make sure our innovations are meaningful solutions to existing problems,” explained Tim Wallace, executive vice president for the Western Hemisphere at United Safety.

Within a few months and with continuous engagement with the customer, United Safety created a custom-designed breathing air regulator system that allowed the monitoring of individual workers’ air flow in real time. Now called the Air II™ Flow, the breathing air manifold is capable of flowing 4,500 cubic feet of air per hour and supports a crew of up to four users. It contains pressure gauges so total volume stored and local pressure are visible to workers.

“Providing breathing air is common practice, but having the ability to monitor workers’ breathing activities while in high-risk confined spaces where line of sight is not feasible is revolutionary. This is the first product in the market that directly monitors individual workers’ air usage,” said Shayne McCallum, vice president for North America at United Safety.

The Air II Flow is designed to have no

limitations in terms of distance to air supply. Multiple work areas are supplied from a single air storage unit. Using the “fill on the fly” technology, the Air II Flow reduces worksite congestion and minimizes the need for forklifts and constant movement of staff performing rig in/rig out for refills. This decreases the

work interruption while increasing tool time and safety of operations.

“The Air II Flow also eliminates the need for separate bottle watch at the air storage, which reduces the number of required personnel for the turnaround. The whole experience taught the operator that estab-

lishing a close relationship with a safety service provider and involving them ahead of time pays off. United Safety believes there is always room for innovation,” concluded Wallace.

For more information, visit www.UnitedSafety.net or call (877) 805-5155.



Air II™ Flow

Improve breathing air delivery,
increase personnel safety.

Powering the Safety Revolution.™

United Safety brings you the first High Pressure breathing air regulator system capable of monitoring individual worker’s air usage. Improve efficiency of breathing air delivery, while increasing personnel safety with the Air II™ Flow.

For more information on how we innovate,
visit our website at UnitedSafety.net
or call us at **877-805-5155**.

