



SPIRAL WATER RECOGNIZED FOR DISRUPTIVE POTENTIAL

At the BlueTech Forum in San Francisco in June, filtration specialist Spiral Water was winner of the Disrupt-O-Meter Award, presented to the Innovation Showcase finalist most likely to disrupt the market. The California-based company's self-cleaning filter technology was a hit with both delegates and judges.

The stainless steel cylindrical filter contains a spiral-shaped wiper inside, which continually cleans the filter element. Using a cleansing brush that is always spinning means that dirt does not build up, so the pressure differential as liquid passes through the filter is minimal, optimizing energy consumption.

"We originally developed the self-cleaning filter for use in biofuel production," said David Levitt, chief technology officer for Spiral Water. "It was important to make it cost effective by minimizing the energy requirement for filtration." The spinning wiper is a mechanical device that uses a motor to pump water out and push solids down and away from the filter. Proprietary geometry ensures that fluid flow is shared equally across the membrane.



Paul O'Callaghan, CEO of BlueTech Research, presents Spiral Water CEO Ashwin Gulati (left) with the Disrupt-O-Meter Award for market potential.

“The pumped solids are concentrated at the bottom of the filter housing. Influent concentrations of suspended solids as high as 25,000 mg/L can be processed with 99.9 percent water recovery and no need to halt production for maintenance and filter cleaning.”

“The solids are removed from the housing by activating a purge valve,” Levitt said. “We have a proprietary technology to measure build-up of solids electronically and automatically activate the valve to let them out.”

The Spiral Water Filter can be used on industrial wastewater, seawater and produced water from oil processing. It has also been applied in the food and beverage sector both on brewery wastewater and, in one instance, to maximize juice recovery for a pomegranate processor. The company shared a macro filtration case study with delegates at the BlueTech Forum.

Technology Development

“We are currently looking for partners to develop this technology for other large-scale users in the industrial, marine and municipal markets,” said Spiral Water CEO Ashwin Gulati. “One of the most exciting developments will be to look at new ways of turning solid waste byproducts into usable assets.”

“The Spiral Water filter is a very exciting development. The combination of a pretreatment strainer with a highly effective solids concentrator addresses some real unmet needs in the industry,” said O2 Environmental Technology Assessment Group member Graeme Pearce. “This technology has an amazing breadth of operation and achieves significantly higher solids operation than competitor technologies.”



Spiral Water’s Automatic Self Cleaning Filter is suited to applications in industrial wastewater, oil & gas, and pretreatment for desalination.

“Reducing energy consumption in filtration processes is a challenge for all industrial users,” noted Paul O’Callaghan, CEO of BlueTech Research.

Spiral Water has been awarded a place in the Innovation Pavilion at WEFTEC in New Orleans, September 24-28, 2016.

The next BlueTech Forum takes place in June 2017 in Dublin, Ireland. For more information, visit www.bluetechforum.com.