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Shotwell Releases New, More Effective H₂S Scavenger

Midland manufacturer uses patented tech to increase run-time, efficiency of MEA triazine

(MIDLAND, TEXAS – April 8, 2021) – Shotwell Hydrogenics has launched a patent-pending hydrogen sulfide scavenger that makes the most of MEA triazine, extends operational life, and is less likely to form problematic solids. The product is powered by NRGMax®, a proprietary platform technology that makes active chemical ingredients perform better.

"MEA triazine has become a staple for customers who need to remediate toxic hydrogen sulfide gas," says Russell Brown, President of Midland-based Shotwell Hydrogenics. "We've taken an MEA triazine and combined it with NRGMax technology to formulate a scavenger that outperforms what's available on today's market and addresses the issues that operators experience with standard 40% MEA triazine."

In normal oilfield applications, MEA triazine is utilized to treat H₂S, but "breakthrough" occurs when only 70-75% of the treatment chemical is spent. Meaning that 25-30% of the applied MEA triazine is never fully utilized before it becomes ineffective at neutralizing hydrogen sulfide. The NRGMax formulation has been field trialed and consistently shows that it's 95-100% spent before breakthrough occurs, extending operational life and processing more pounds of H₂S per gallon of treatment product.

"For customers to get the full value from their MEA triazine investment is a win for operational economics in addition to worksite safety," says Brown. "In the bubble tower field trials that our partners have conducted, they've seen that our NRGMax MEA triazine lasts 20-40% longer than towers on the same pad using standard MEA triazine. When you combine that added run-time with the fact that we're getting the maximum potential out of the product without fouling, you can start to tally up how the product will result in lower chemical, service, and logistics costs."

Shotwell has completed bubble tower and static mixing application field trials with their new product. In multiple trials in the Permian Basin, a customer tested the product versus a standard 40% MEA triazine on a two well battery that utilized a 1,000-gallon bubble tower, both with an average inlet concentration of 120ppm H₂S. The Shotwell product remediated H₂S for 29.4 days compared to the control tower that lasted for 21 days without producing solids. Further, the NRGMax-powered blend treated 0.98 pounds per gallon, while the control only treated 0.70 pounds per gallon and wasted 30% of the MEA triazine.

"In this field trial, we utilized nearly 90% of the available triazine due to the NRGMax formula, and did so without creating solids. Because no solids were generated, the customer did not

have downtime associated with cleaning out equipment and disposing of solids," noted Derek Vaughn, Technical Director for BPS Oil & Gas who oversaw product development with NRGMax for Shotwell's latest product. "In all of our field trials, we've seen that our formula is not likely to precipitate solids, even realizing as high as a 96% MEA triazine utilization. This is important because a customer will spend time and money each time they swap towers to rinse out solids or shut down production."

Mirroring the success in bubble tower applications, in third-party field trials using the Shotwell MEA triazine in a static mixer application, an operator realized 20% efficiency gains with no solids generated.

The solution is available to service companies from Shotwell Hydrogenics and ships from Midland, Texas. Shotwell is a state-of-the-art, ISO9001:2015 certified and NSF (National Sanitation Foundation) certified chemical manufacturing plant capable of large volume production. Shotwell maintains a strict focus on quality assurance and quality control for all products.

About Shotwell Hydrogenics

Shotwell Hydrogenics is a chemical manufacturing facility that produces specialty products for the oil and gas industry, HI&I sector, and agricultural. Specializing in performance monitoring and chemical management services, Shotwell offers water-soluble toll blending, chemical selection, and verification. The Midland, Texas-based facility is ISO9001:2015 certified and is the exclusive manufacturer of NRGMax® and OpusMAX® products for the BPS Technology family of companies. Learn more at shotwellhydrogenics.com.

About BPS Oil & Gas

BPS Oil & Gas, LLC is a Texas-based technology company seeking to enhance how chemicals are utilized and deployed in Upstream, Midstream, and Downstream applications. Their proprietary NRGMax® host chemistry enhances end-product performance for a wide range of oil and gas chemicals. The results are more efficient applications and reduced operating costs for operators across the industry. Whether it's in the oilfield, the pipeline, or at a refinery, BPS Oil & Gas is committed to significant return on customer investments. BPS Oil & Gas is a division of BPS Technology, a privately held holding company. Learn more at bpsoilandgas.com.

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