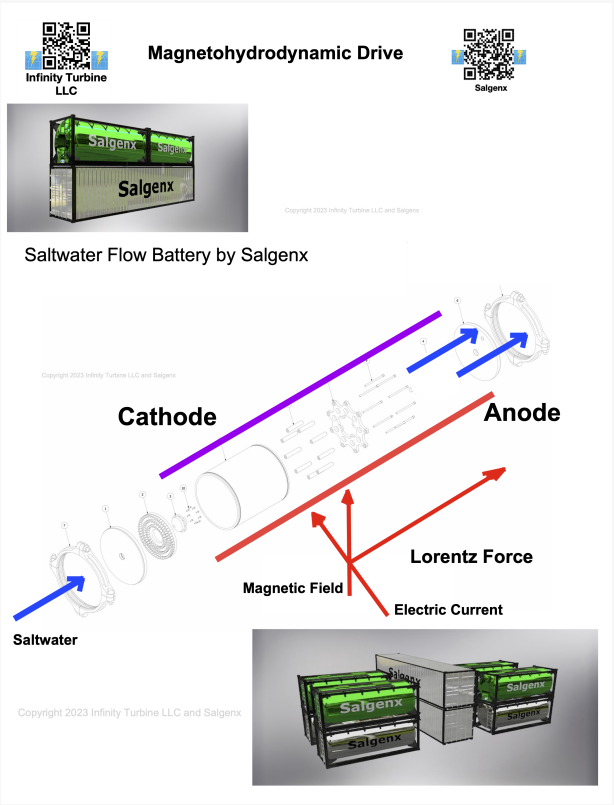
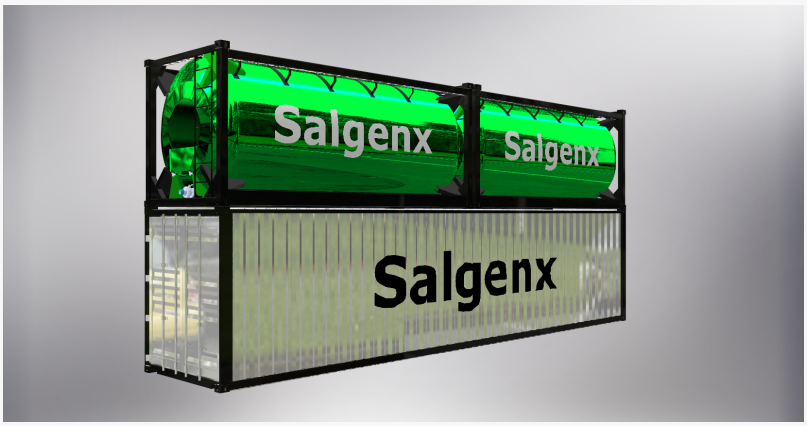
Revolutionary Magnetohydrodynamic Drive Empowers Next-Gen Saltwater Flow Battery for In-Situ Power Generation

Breakthrough Magnetohydrodynamic Drive boosts saltwater battery for on-site power. Revolutionizing in-situ energy generation.

MADISON, WI, USA, August 14, 2023 /EINPresswire.com/ -- In a groundbreaking leap towards sustainable energy solutions, Salgenx, a trailblazing leader in advanced energy technologies, has unveiled the integration of magnetohydrodynamic (MHD) drive technology into their cutting-edge saltwater flow battery system. This innovation marks a significant advancement in the field of renewable energy and energy storage, paving the way for enhanced efficiency and versatility in in-situ power generation.



Salgenx Magnetohydrodynamic Pump Drive



Salgenx S3000 Salt Water Battery Energy System

MHD drive technology (currently being developed by DARPA) harnesses the power of electromagnetic forces and fluid dynamics, enabling the creation of a self-sustaining flow within the saltwater flow battery, while charging. This elegant engineering solution reduces or eliminates the need for traditional mechanical pumps, streamlining the design, and significantly enhancing the system's reliability and lifespan. The marriage of MHD drive and saltwater flow battery technology presents an eco-friendly and efficient means of generating, storing, and utilizing clean energy.

> Our integration of magnetohydrodynamic drive technology with saltwater flow batteries is a testament to our commitment to pushing the boundaries of what's possible in the realm of renewable energy”
>
> *Greg Giese, CEO of Salgenx*

"Today, we stand at the intersection of innovation and sustainability. Our integration of magnetohydrodynamic drive technology with saltwater flow batteries is a testament to our commitment to pushing the boundaries of what's possible in the realm of renewable energy," stated Greg Giese, CEO of Salgenx. "This milestone not only bolsters the efficiency and reliability of our energy storage solutions but also positions us as a key player in the global movement towards greener, more sustainable power generation."

The benefits of this pioneering integration are manifold:

1. Enhanced Efficiency: The MHD drive eliminates mechanical inefficiencies associated with traditional pumps, resulting in higher energy conversion and storage efficiency.

2. Longevity and Reliability: By reducing the number of moving parts, the system's operational lifespan is extended, offering greater reliability and reduced maintenance requirements.

3. In-Situ Pump Power Generation: The self-sustaining flow generated by MHD technology while charging enables the system to generate flow power directly at the point of use.

4. Environmental Sustainability: Utilizing saltwater as the electrolyte and eliminating the need for hazardous chemicals ensures a more eco-friendly energy storage solution for grid-based power storage.

5. Adaptability: The combined technology is versatile and adaptable to various applications, including off-grid power generation storage, emergency backup systems, and integration with grid-based renewable energy sources.

Although the magnetohydrodynamic flow within each battery cell is modest in scale, its potential amplifies significantly through the integration of multiple cells and an ejector pump. This synergy can generate elevated pressures, suitable for in-situ employment alongside Reverse Osmosis (RO) desalination systems. When coupled with the inherent desalination propensity observed during battery charging within the flow battery, this approach stands poised to revolutionize the desalination process. The anticipated outcome is a remarkable reduction in pump power consumption, marking a pivotal advancement in the field.

The integration of MHD drive technology into saltwater flow batteries opens the door to a more sustainable energy landscape, enabling businesses and communities to harness the power of nature without compromising efficiency or reliability. As Salgenx continues to lead the charge in sustainable energy solutions, this breakthrough solidifies their position as a forward-thinking

industry leader.

For more information on how to embark on this transformative journey toward renewable energy storage innovation, interested parties are encouraged to visit the Salgenx website.

Salgenx has recently published the "Salgenx Saltwater Redox Flow Battery Technology Review," a comprehensive report detailing the advancements and capabilities of their innovative energy storage technology. The report provides an in-depth analysis of flow battery technology and their possible applications in a saltwater battery system. It highlights the benefits of redox flow batteries, offering valuable insights into the future of grid-scale energy storage. The report is available through Infinity Turbine website: https://www.infinityturbine.com

Salgenx, a division of Infinity Turbine LLC is committed to advancing the development of this innovative technology through collaboration with industry partners, academic institutions, and government agencies. The company anticipates pilot projects and commercial deployments in the future when funding becomes available, contributing to the global transition towards a clean and sustainable energy infrastructure.

About Salgenx:
Salgenx is a leading provider of advanced energy storage solutions. The company specializes in developing innovative technologies and products that address the challenges of grid integration, renewable energy storage, and peak power management. Salgenx is committed to driving the adoption of sustainable energy solutions to build a greener and more resilient future.

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