



Linxens and Memsift Innovations are transforming microelectronics manufacturing with the world's first sustainable nickel recovery system, leveraging advanced Membrane Distillation Technology

Singapore, 6th February 2024 - In a groundbreaking collaboration, Linxens, a global leader in microelectronics, and Memsift Innovations introduce the world's first commercial Membrane Distillation System for Sustainable Nickel Recovery.

The journey began in 2019 when Linxens Singapore embarked on a technical feasibility study with Memsift Innovations, exploring the potential of the cutting-edge TS-30[™] Improved Membrane Distillation system. Promising results emerged, indicating a potential liquid waste volume reduction of over 90% while recovering concentrated Nickel Sulphate.

Building on these promising outcomes, a pilot program launched in early 2022 showcased the system's ability to consistently treat liquid waste and produce exceptionally high-quality water that surpassed expectations. Impressed by the pilot's success, Linxens now embraces this technology on a commercial scale, marking a significant step towards closing its liquid waste loop.

In collaboration with their esteemed supplier Memsift, Linxens is excited to unveil a pioneering strategic initiative that marks a significant milestone in cost reduction and environmental sustainability. The cuttingedge membrane system introduced by Memsift has resulted in an impressive over 90% reduction in waste disposal costs, coupled with a remarkable 60% decrease in carbon footprint compared to conventional disposal and incineration methods. It is essential to emphasize that these substantial reductions, including the estimated annual decrease of 71 tons of CO2 emissions, are derived from meticulous calculations provided by Memsift. The concentrated solution, involving approximately 26.8 tonnes of nickel sulfate salt for recovery (equivalent to 10.2 tonnes of nickel), reflects a carbon footprint of 11.5kg/kg for nickel. This initiative



represents a significant leap towards a more sustainable and environmentally conscious approach in the microelectronics manufacturing sector.

Officially inaugurating the Membrane Distillation-based Nickel recovery system today, Linxens Microelectronics stands as a beacon of sustainable industry practices - setting a global standard for the sector.

Linxens group CEO Mr Cuong H. Duong emphasized the company's commitment to sustainable solutions and Corporate Social Responsibility through their Vitality program. "Notably, Linxens actively engages with local communities, supporting education, healthcare, and environmental conservation initiatives. We are not merely focused on advancing technological frontiers; our dedication extends to nurturing a flourishing ecosystem.

By incorporating the innovative Membrane Distillation System, Linxens aims to initiate a ripple effect of positive change, harnessing its environmental benefits both within our ecosystem and beyond."

Mr. Velmurugan Ramanathan, Director of Operations at Linxens Singapore, expresses enthusiasm about the collaboration with Memsift, highlighting their pivotal role in implementing the Membrane Distillation System. He emphasizes how the technology's efficiency has revitalized operations, resulting in a substantial 90% reduction in disposal costs and a 60% decrease in carbon footprint. Mr. Velmurugan also expresses interest in continuing this collaboration with Memsift for future endeavors.

Dr. J. Antony Prince, Founder & CEO of Memsift Innovations, expresses his enthusiasm for this collaboration, lauding Linxens Singapore for its unwavering support. Dr. Prince highlights the project's significance in transforming waste into value, showcasing how global industry leaders can collaborate with innovative startups like Memsift to address critical global challenges, including water conservation (SDG-6) and climate change (SDG-13).

This endeavor represents more than just a technological milestone; it serves as evidence of industry leaders spearheading the development of sustainable solutions. Linxens and Memsift Innovations are forging a path towards a cleaner and environmentally conscious future in microelectronics manufacturing, aligning with global objectives for a responsible and more sustainable planet.

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About Linxens: Linxens is a global leader in innovative solutions in a variety of industry sectors, and aims to provide tailor-made solutions to help business partners improve their operations to deliver seamless end-user experiences. Linxens is the preferred supplier to many of the world's technology pioneers who are shaping the markets for telecommunications, transportation, hospitality, leisure and entertainment, financial services, e-Government, access control, healthcare and the Internet of Things (IoT). https://www.linxens.com/

Memsift Innovations is a pioneering leader in membrane-based separation and purification solutions. Committed to innovation, sustainability, and the transformation of waste into value, Memsift has gained global recognition. Their innovative technologies include Improved Membrane Distillation (IMD), which efficiently recovers valuable materials from industrial effluents while reducing environmental impact. Additionally, their Chemical-Resistant Ultrafiltration/Nanofiltration (CR UF/NF) systems set new standards for purification, with the capability to withstand harsh chemicals and selectively separate components. Memsift Innovations is dedicated to revolutionizing waste management, resource recovery, and sustainability, establishing itself as a prominent player in the global landscape. (www.memsift.com)

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