

FIRST QUANTUM MINERALS TO EXPAND KANSANSHI MINE WITH MECS® TECHNOLOGY

Plant expansion sets mining operation on path towards more sustainable production of metals essential for green energy transition

ST. LOUIS, USA, September 22, 2023 – Global copper company, First Quantum Minerals Ltd. (First Quantum) has contracted with MECS, Inc. (MECS), a subsidiary of Elessent Clean Technologies (Elessent), for the Kansanshi Smelter Expansion at the Kansanshi Mine in Solwezi, Zambia. The MECS scope will include a redesign of the existing sulfur-burning sulfuric acid plant into a copper smelter off-gas recovery sulfuric acid plant. This transition to a copper smelter off-gas recovery acid plant will enable First Quantum to reduce emissions from the existing copper smelter, increase production at the mine, and supply more copper to the global market which will enable the adoption of greener technologies.

“The expansion of the Kansanshi Mine and transition to a smelter off-gas recovery sulfuric acid plant is an integral step to the extended life of the mining operation. It was important for Kansanshi and First Quantum to embark on this expansion by using environmentally sound practices, and MECS is honored to play a part in this project. The MECS® technology, products and equipment used in the plant’s design are world-class and will ensure their commitment to sustainability and social responsibility are met,” said Brian Blair, MECS® Global Licensing Manager, Elessent.

The MECS® sulfuric acid design for First Quantum incorporates state-of-the-art products and technologies, such as MECS® catalyst for low emissions and high conversion, Brink® mist eliminators for superior mist elimination and ZeCor® alloy towers, ZeCor® pump tank and UniFlo® acid distributor technology for operational reliability and efficiency. The sulfuric acid plant conversion will also facilitate increased capacity for First Quantum to better serve their clients, as well as benefit the region by contributing to a more competitive and cleaner global supply chain of copper and gold.

“Supporting the Kansanshi Smelter Expansion with First Quantum and the Kansanshi Mine has been an exciting opportunity. Not only is MECS helping to extend the life of the mine and optimize operations, but we are also in a unique position to help make a tremendously positive impact on the environment by helping reduce emissions,” said Eli Ben-Shoshan, CEO, Elessent.

Startup of the Kansanshi Smelter Expansion at the mine site in Solwezi, Zambia is expected to take place in 2025.



The MECS[®] sulfuric acid technology has been in use for nearly a century in the phosphate fertilizer, non-ferrous metals (leaching & smelting), oil refining and general chemical industries. MECS[®] technologies feature breakthrough solutions, many of which have revolutionized the performance, quality and cost-effectiveness of customer operations. They include MECS[®] heat recovery systems (HRS[™]), MECS[®] SolvR[®] regenerative SO₂ scrubbing and MECS[®] MAX3[™] sulfuric acid production technology. Integrated into these MECS[®] technologies are proven specialty products such as catalysts, Brink[®] mist eliminators, DynaWave[®] scrubbers, ZeCor[®] corrosion resistant alloy products, and acid coolers all of which are specifically designed for the most demanding operating environments. Marketed by Elessent Clean Technologies, the MECS[®] technology is the world-leading sulfuric acid production technology with more than 1,000 sulfuric acid plant licenses and projects. Elessent Clean Technologies is committed to long-term customer satisfaction and support for the life of customer assets. Learn more at ElessentCT.com



About Elessent Clean Technologies

Elessent Clean Technologies is a global leader in process technologies to drive sustainability and carbon neutrality in the metal, fertilizer, chemical and oil refining industries with an unwavering commitment to customer support. We provide extensive global expertise across our portfolio of offerings in key applications – MECS[®] sulfuric acid production, STRATCO[®] alkylation, BELCO[®] wet scrubbing and IsoTherming[®] hydroprocessing. Offering critical process equipment, products, technology and services, we enable an array of industrial markets, including phosphate fertilizer, non-ferrous metals, oil refining, petrochemicals and chemicals, to minimize their environmental impact and optimize productivity. We are dedicated to helping our customers produce high-quality products used in everyday life in the safest, most environmentally-sound way possible, with a vision to make the world a better place by creating clean alternatives to traditional industrial processes. Learn more at www.ElessentCT.com.

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