Enviroleach Technologies extracts tin and copper from e-waste

Enviroleach Technologies Inc.(TSX.V: ETI)

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Mr. Ish Grewal reports

ENVIROLEACH RECOVERS TIN AND COPPER FROM PRINTED CIRCUIT BOARD MATERIAL

Enviroleach Technologies Inc. has made significant progress in the simultaneous extraction of tin and copper from end-of-life printed circuit board assemblies.

An extensive 12-month laboratory test program has resulted in a multimetal recovery process for the extraction of tin and copper from PCBAs. The metals recovery involves the initial mechanical separation of the PCBAs into a copper-rich concentrate and a non-metallic fraction.

The copper-rich concentrate is then treated hydrometallurgically to dissolve the copper and tin into solution under ambient temperature and pressure conditions. Following dissolution, the copper is recovered using conventional electrowinning technology as almost pure copper

metal. The tin is removed from solution using proven physical separation methods to produce a marketable tin oxide product.

The test results confirmed the ability of Enviroleach’s process to effectively extract a nearly pure copper metal, grading greater than 99 per cent, and recover up to 92.6 per cent of the tin in the form of a valuable tin oxide product.

The company is currently developing a detailed process flow sheet which will be applied in an upcoming pilot scale testing program. Pilot scale testing will confirm the scalability, recoveries, costs and other operating parameters of the new combined copper/tin recovery process.

The recovery of copper and tin from PCBAs has the potential to give the Enviroleach process a distinct economic advantage compared to conventional smelting. When combined with Enviroleach’s current processing technology, the copper and tin recovery phase results in an over-80-per-cent mass reduction of PCBAs. This mass reduction results in significantly reduced downstream extraction and refining-related charges, and higher metal payments. In addition, the recovery and sale of tin creates potential for increased operating margins.

The novel and cost-effective copper and tin recovery process will potentially provide a domestic, more environmentally friendly and low carbon dioxide equivalent emission alternative to the current smelting of whole PCBAs, and result in a substantial contribution towards the achievement of an eco-friendly global circular economy.

Ish Grewal, vice-president, comments: *“The last 12 months of extensive research and laboratory tests have confirmed the viability of the tin/copper recovery process. The potential high mass reduction delivers multiple benefits such as the higher concentration of residual precious metals, the reduction of smelting and shipping costs, and of course the reduction of carbon dioxide equivalent emissions associated with the current smelting of whole PCBs. I am excited about our recent accomplishments and look forward to the commercialization of another disruptive and eco-friendly alternative to the incumbent processes. Our compelling technology platform can provide an important contribution to the adoption of circular economy systems in the primary and secondary metals sectors.”*

About Enviroleach Technologies Inc.

Enviroleach Technologies is engaged in the development and commercialization of environmentally friendly formulas and technologies for the treatment of materials in the primary and secondary metals sectors. Using its proprietary non-cyanide, water-based, neutral pH treatment process, Enviroleach extracts precious metals from ores, concentrates and e-waste.

Backed by a first-class staff of scientists and engineers, tens of thousands of individual tests and assays, independent validations, strategic partners and tens of thousands of hours in research and development, Enviroleach’s technology is emerging as a potential new standard for the provision of eco-friendly methods for the hydrometallurgical extraction of precious metals in both the mining and e-waste sectors.

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