

ELECTROWINNING – PRECIOUS METAL RECOVERY METAL RECOVERY

Electrowinning is a world leading technology. Through technical innovation, intelligent engineering and use of modern materials, Light's Electrowinning technology employs a hardware system which effectively 'turbocharges' an age old process. The result is a dramatic improvement in efficiency, significantly lowering cost and extension of potential uses well beyond its traditional marketplace



What is electrowinning?

Electrowinning is electrochemical Precious Metal Recovery / Metal Recovery from their dissolved state. It involves the application of electrical current between two electrodes immersed in a metal bearing solution (known as electrolyte). Under the correct conditions the dissolved metal will plate on to the negative electrode (cathode). Electrowinning technology has been demonstrated to achieve significantly enhanced performance over a wide range of flows and effluent conditions, and is now implemented in many mining and industrial settings around the world.

Conventional electrowinning involves placing an anode and cathode into a bath of slowly circulating or stagnant electrolyte. The metal ions eventually make their way to the cathode to be plated.

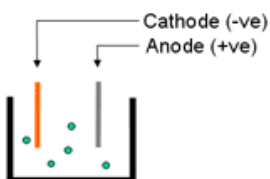
With Light Environmental electrowinning, the electrolyte is circulated rapidly past the anode and cathode at a higher flow rate, allowing for improvements in efficiency and the precious metal recovery / metal recovery.

Which metals can Light Environmental's electrowinning recover?

The Light Environmental electrowinning cell is used for Precious Metal Recovery / Metal Recovery for a variety of metals including gold, silver, platinum, cadmium, cobalt, copper, nickel, tin, zinc, lead, manganese and many other metals.

To what level can the Light Environmental electrowinning cell recover metals?

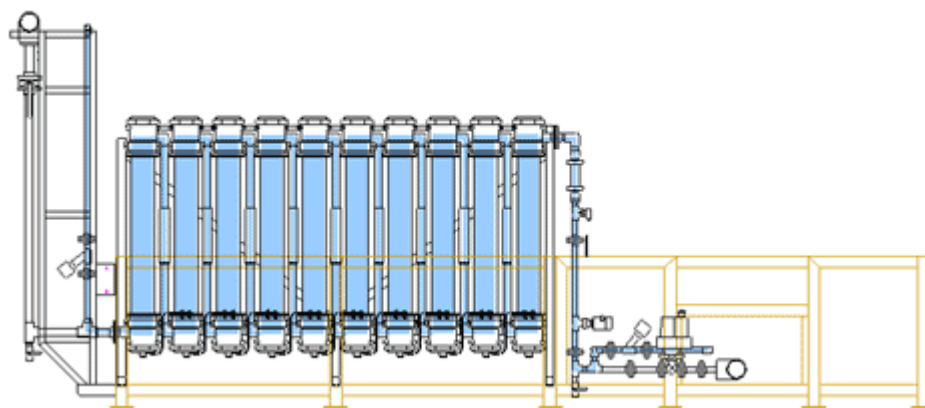
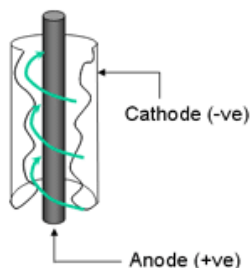
The level of metal recovery that Light's electrowinning technology can achieve does depend somewhat on the solution chemistry and the target metals. However in the case of gold the Light's cell has achieved a discharge level of 0.01 ppm and 0.1 ppm for copper.



Broaden process options with Light's electrowinning technology.

Due to its inherent simplicity and efficiency, Light's electrowinning technology allows more direct and versatile options in the field of precious metal recovery through:

- Capability to process low metal concentration streams
- Higher productivity than conventional cells.
- Efficiency over a wide range of metal concentration.
- Higher tolerance of contaminants in solution.
- Capability of extracting a variety of metals.
- Capability of selective electrowinning of metals.
- Generally higher purity product.
- Production of either metal cathode or powder.



Learn More

To learn more about our **Electrowinning Solution** or any of our other wastewater solutions, please visit our web site at www.lightenvironmental.com or call our Corporate Sales Office at: 1-816-537-9190.

We look forward to providing your next wastewater solution.

LIGHT ENVIRONMENTAL, INC.

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