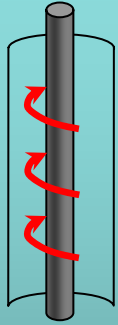


# EMEW® ELECTROWINNING FOR PROFIT



# EMEW®

## COPPER LEACHING ELECTROWINNING

Electrometals Technologies Limited

EMEW® is a remarkably efficient metal recovery technology that elevates small to medium sized copper deposits to commercial viability.

- 20% to 50% reduction in capital cost
- Direct electrowinning from PLS (no SX)
- Highly compatible with solvent extraction
- 99.99% copper purity
- Low start up costs
- Re-locatable (modular) plant
- Financially viable down to 1 tpd production
- High tolerance to impurities
- Regeneration of leaching agent
- A clear choice over Cu recovery by cementation
- An ideal replacement for Cu sulphate production
- Performance maintained through a range of concentration levels

Electrometals Technologies Limited

28 Commercial Drive  
Ashmore  
Queensland  
Australia 4214

Phone: +61 (0) 7 5526 4663  
Fax: +61 (0) 7 5527 0299  
emew@electrometals.com.au  
ACN 000 751 093

[www.electrometals.com.au](http://www.electrometals.com.au)

## COMPARATIVE CHARACTERISTICS

EMEW® simplifies the process of recovering metals by electrowinning (EW). The basic principles of electrowinning are applied in many mining and metal treatment plants around the world. However, in conventional usage, the process is restricted in application due to limitations in operating versatility and high capital cost.

EMEW® is capable of direct electrowinning of high-grade cathode or copper powder directly from low-grade copper bearing leach solutions.

This ability to directly electrowin results in significant flow sheet simplification over conventional plants, through the removal of solvent extraction (SX) from the circuit and offer significant savings in capital. When used in conjunction with SX, the EMEW® technology can operate at significantly higher current density than a conventional plant, using approximately one third or less of the active cathode area for the same result. The inflexibility of conventional EW dictates very rigid conditions for SX. The result is a very complex amalgamation of processes that are expensive, unscalable and unforgiving in application. In contrast, the EMEW® technology unlocks this rigid combination of design criteria and results in a significant reduction in capital and operating expense.

The overall result is that EMEW® allows development of significantly smaller scale projects than is possible using conventional SX-EW.

EMEW® outperforms conventional electrowinning technology through a simple process of accelerating the rate at which metal ions are presented to the surface of the cathode. This significantly increases plant efficiency resulting in lower cost, higher performance levels, increased process versatility and a variety of other economic benefits.

	SX-EW	EMEW®
	Conventional	
Process Versatility	LOW	HIGH
Current Density	LOW	HIGH
Acid Mist	YES	NO
Total Gas Capture	NO	YES
Re-locatable	COSTLY	EASY



EMEW® is a global entity with affiliate sales & technical support offices in Australia, Brazil, Canada, Chile, Italy, Singapore and USA.

To locate a contact near you, visit our webpage:  
[www.electrometals.com.au](http://www.electrometals.com.au)

### Electrometals Technologies Limited

#### Operating Costs (approx)

Cost/lb \$USD	3 tpd	12 tpd
SX-EW	0.15	0.12
EMEW®	0.11	0.09

#### EMEW® Advantage

- ◆ Robust Design
- ◆ No ventilation required
- ◆ Total gas capture
- ◆ Recovery in a single step
- ◆ Low depletion limits
- ◆ Small efficient plant
- ◆ High product purity
- ◆ Modular construction
- ◆ Low maintenance
- ◆ No moving parts

The EMEW® technology is capable of recovering many metals including Platinum, Gold, Silver, Nickel, Cobalt, Copper, Tin, Zinc and Cadmium. The broad range of applications to which EMEW® is ideally suited has resulted in EMEW® installations in North America, South America, Europe, Africa, Asia and Australia.

#### Indicative Electrowinning Capital Cost (\$M USD)

Production Rate (tpd Cu)	Conventional SX-EW	Direct EMEW - SX-EMEW	Saving
3 TPD	2.9	1.3 - 1.5	48% +
6 TPD	3.9	2.2 - 2.4	39% +
12 TPD	5.9	3.6 - 4.0	32% +

**Electrometals Technologies Limited** provides a full range of products and services to the metal recovery industry; from flowsheet development and process engineering to "total package" turnkey projects.



" EMEW cells are equipped with Dimensionally Stable Anodes (D.S.A.®) manufactured by De Nora Elettrodi Network. D.S.A.® is a registered trade mark of D.N.E. S.p.A."

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