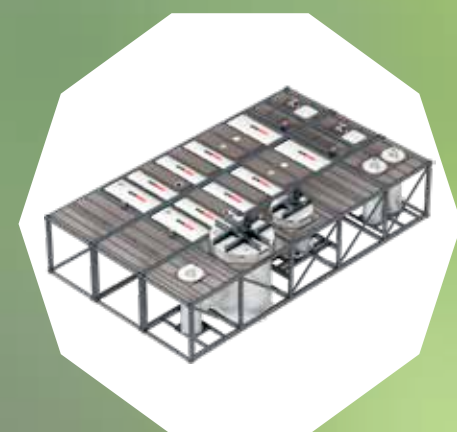


Planet Positive portfolio – Hydrometallurgy



VSF® X



OKTOP® CIL Reactor



OKTOP® Cooling Towers



MesoTHERM BIOX®

Applications

- Copper
- Battery minerals (Mn, Co, Ni)
- Zinc
- Uranium
- Boron removal for lithium brine

- All gold operations use a CIL/CIP circuit and wish to produce Gold Doré onsite or want to improve their existing CIL/CIP performance

- Cooling of spent electrolytes in a zinc electrowinning solution circulation
- Gypsum removal and chloride removal circuits in zinc refineries
- Gypsum removal before solvent extraction and cooling of solutions in gold autoclave circuits

- Treatment of refractory gold ores

Why is this equipment a part of the Planet Positive portfolio?



Lowest energy consumption to maintain dispersion in mixer tanks.

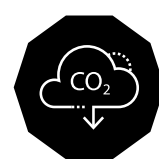


Modular units can be utilized as 2nd hand equipment.



Up to 100% reduced embedded carbon through modularity when product is reused.

Baseline: conventional non-modular mixer settler.*



Reduced activated carbon loss by 30-50% compared to industrial benchmarks.



Energy savings range from 30% to 50%, compared to industrial standard solutions.



Reduction of gold losses by 30-50% compared to industrial benchmarks in CIL reactors.

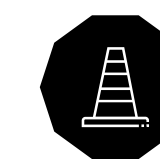
Baseline: conventional reactor design for carbon in leach (CIL)*



Horizontal outflow of the gas for high efficiency with very low emissions.

Baseline: conventional vertical outflow tower*

*Information based on Metso assessment of products against industry baseline.



Reduces cyanide consumption by up to 50%, minimizing inventory requirements and reagent use, and reducing safety risks.



Produces cleaner BIOX product solids.

Baseline: Conventional mesophile BIOX process*

Marketing Claim >>