

P R E S E N T A T I O N

**Increasing Metal Extraction
from Ores, Concentrates, and Waste Rock
Using Electro-Hydroshock
Magneto-Pulse Technology**


**Today
a significant
portion of metals
is not extracted
from ores
and remains
in waste**



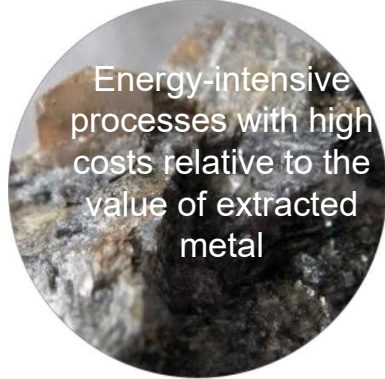
Increasing metal extraction is difficult:



Aggressive chemical treatments required causing significant environmental harm



Additional equipment needed - new capital-intensive production chains



Energy-intensive processes with high costs relative to the value of extracted metal

In other words, it's EXPENSIVE!



PROBLEM SOLUTION:

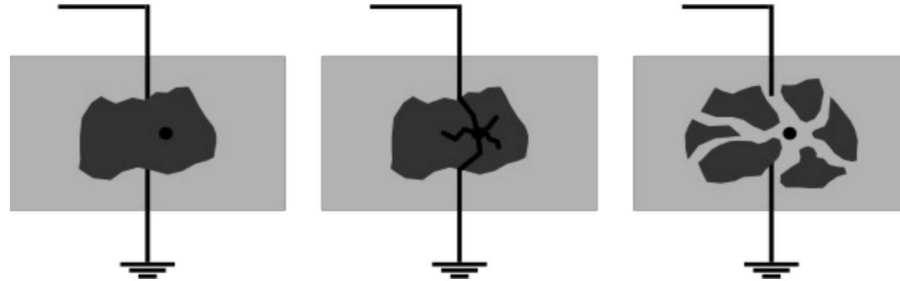
**Electro-
Hydroshock
Magneto-Pulse
Technology**

or

EGUMI Technology

The EGUMI technology working principle is very simple:

it causes additional fragmentation
of source material particles
along mineral grain boundaries



How does EGUMI technology work?



Electro-Hydroshock (EHS)

Non-contact destruction of source ores, concentrates, and technogenic waste through shock waves and wedging pulse hydroflows ensures selective mineral liberation along mineral grain boundaries.



pH Transformation

Simultaneously ensures transformation of hazardous and toxic substances through pH increase and formation of short-lived radicals (relevant for technogenic waste).



Magneto-Pulse (MP)

Activation of flotation concentrates, gravity concentrates, and gravity tailings promotes formation of micro-cracks throughout each particle, increasing solution-metal interaction area during leaching and reducing leaching time while increasing metal extraction into solution.

3 types of materials can be processed*:

- Ores
- Ore concentrates
- Technogenic waste from ore processing

** The complete absence of chemistry or hazardous and toxic substances makes EGUMI technology an environmentally clean method of preparing source ores or technogenic waste for processing, and magneto-pulse activation of flotation concentrates, gravity concentrates, and flotation tailings makes the metal extraction process economically more viable.*



Example Results of EGUMI Technology Application for Metal Extraction from Ore:

ORE	METAL EXTRACTED	EXTRACTION BEFORE PROCESSING, % (GR/TON)	EXTRACTION AFTER PROCESSING, % (GR/TON)	ADDITIONAL METAL EXTRACTED PER TON ORE	EXTRACTION INCREASE, %
Chilean ore BejosLTDA	Cu	4.35%	7.09%	27.4 kg/ton	162%
Copper ore Romania/Serbia	Cu Cu	1.56% 1.53%	8.67% 8.34%	71.1 kg/ton 68.1 kg/ton	555% 445%
Cobalt-copper, Kenia	Co Cu	1.86% 0.41%	3.45% 1.91%	15.9 kg/ton 15.0 kg/ton	185% 465%
Berezovsky mine, Yekaterinburg	Au	3.6 gr/ton	11.83 gr/ton	8.23 gr/ton	348%
Veduga complex, AMIKAN	Au	3.6 gr/ton	9.8 gr/ton	6.2 gr/ton	272%
Uryupsky GOK, Tails	Au	0.96 gr/ton	1.59 gr/ton	0.6 gr/ton	165%

EGUMI technology is offered as a turnkey service, including supply and commissioning of the necessary industrial complex

Our industrial complexes allow:

- Grinding ores of standard sizes 0.4-150 mm (obtained after initial coarse crushing) to particles 0.1-0.8 mm optimal for maximum selection for further use in the 'enrichment' stage
- Regulating the grinding of input material to various particle size distributions
- Using a closed cycle from processing source material to obtaining the final product, ensuring environmental cleanliness of the technology
- Maximizing the liberation of valuable metals from ores, previously not economically viable due to low metal content in mineral rock
- Providing significant energy savings and complete absence of chemistry or hazardous and toxic substances
- Maintaining compact equipment layout of technological processes, ensuring low capital costs when replicating production modules to increase capacity for in-demand high-liquidity products

Cooperation Model:

- We take on all costs associated with equipment production, delivery, installation and commissioning, as well as maintenance and direct management of working processes.
- The partner enterprise provides raw materials for processing and connection to necessary utilities. No capital expenditure is required from the partner.
- The parties cooperate on a profit-sharing model, with terms defined for each individual project.



THANK YOU FOR YOUR ATTENTION

For general inquiries:

Partnerships and proposals: