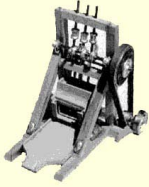


Small Mining Supplies (Pvt) Ltd

Clean, Appropriate Processing Solutions

- Specifically targeting small miners
- Alluvial and hard rock
- Gold and other minerals
- Emphasis upon small, translocatable plant
- SMS is a Zimbabwean company making African solutions for Africa



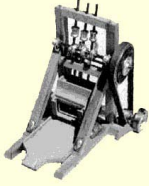
Small Mining Supplies (Pvt) Ltd

A blend of technologies!



High efficiency Knelson
operating upon stamp
mill product – Zimbabwe

The ore dictates its terms

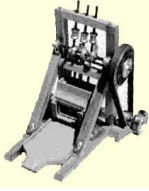


Small Mining Supplies (Pvt) Ltd

Equipment range

- Own manufacture
- Out - sourcing
- Representation

- Technology and testing through association with **Peacocke, Simpson and Associates**



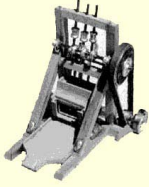
Small Mining Supplies (Pvt) Ltd

Katanka Stamp Mill

- Bolts together –easily shipped
- Easily erected
- Standard parts
- Low energy
- Well proven!

- 0.75 tph, coarse rock

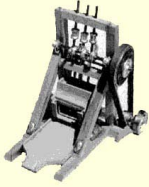




Small Mining Supplies (Pvt) Ltd

Katanka Stamp Mill

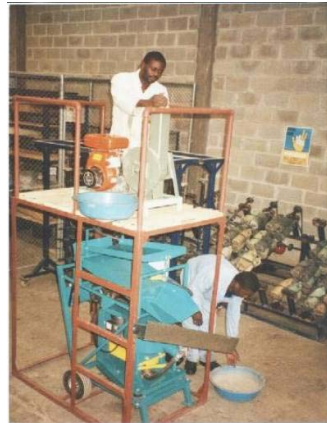
- Available with pre-cast concrete foundations for rapid erection

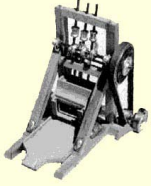


Small Mining Supplies (Pvt) Ltd

Knelson Concentrators

- 7.5" Field exploration 1tph
- CD10 3tph
- CD12 6tph
- Very high efficiency – fine gold recovery



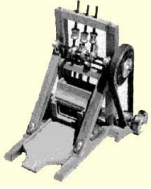


Small Mining Supplies (Pvt) Ltd

Swirler Pan

- Prospecting
- Concentrate cleanup

- Raised dome base and gentle riffle makes for easy and efficient upgrade



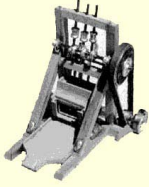
Small Mining Supplies (Pvt) Ltd

Spiracon concentrator

- Small
- Simple
- Inexpensive

- Designed specifically for Katanka Mill – coarse gold recovery

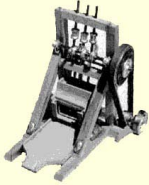




Small Mining Supplies (Pvt) Ltd

PSA Hi-Y Jigs

- Coarse mineral separation
- 6 tph
- Bulk mineral separations
- Used for tantalite, chromite mineral sands, pyrite, etc

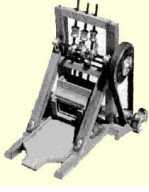


Small Mining Supplies (Pvt) Ltd

RG Scrubbing Plants

- RG60 4-6 tph
- RG150 10-15 tph
- Easily translocatable
- Suitable for sticky clays
- Supplied with Knelson concentrators for a complete solution

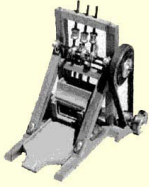




Small Mining Supplies (Pvt) Ltd

Crusher 8 x 4

- Robust
- 75mm rock
- Replaceable wearing parts

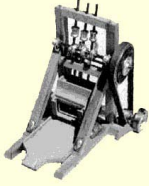


Small Mining Supplies (Pvt) Ltd

Granulator 8 x 12 x 2

- Two stage crusher
- Two machines in one!
- 4 to 6 tph

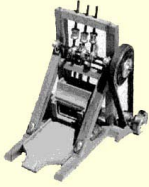




Small Mining Supplies (Pvt) Ltd

Hand Mill

- Small batches
- High grade ore

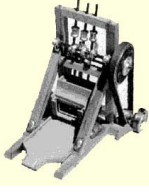


Small Mining Supplies (Pvt) Ltd

Consep Acacia 500

- Intensive cyanidation, but contained and safe
- Complete treatment of gravity concentrates
- Simple, manual operation
- Electrowin finish
- Smaller unit also available for up to 100 kg/batch

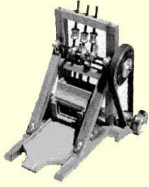




Small Mining Supplies (Pvt) Ltd

Case study – Dericose Mine

- A small scale high grade mine
- Has progressed from artisanal through to more formal stage
- Currently being upgraded to high technology at small scale – no mercury!
- Located in the Mazowe Valley, 40km north of Harare



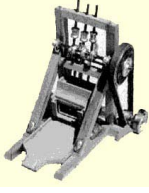
Small Mining Supplies (Pvt) Ltd

Infrastructure

•Even at small scale, 1tph, a properly run mine is able to support reasonable Infrastructure:

•Housing, office, workshop, Store, etc

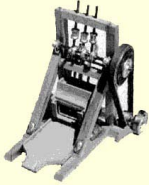




Small Mining Supplies (Pvt) Ltd

Formal underground mining

- Neat, tidy, safe mining
- Note the indigenous tree planted in the foreground –
Aesthetics and concern for the environment

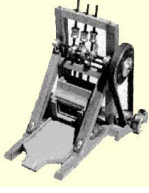


Small Mining Supplies (Pvt) Ltd

Primary milling and gravity recovery

- Currently via stamp mill with crushed ore to a copper plate followed by bowl concentrator and mercury amalgamation – not efficient and environmentally poor.

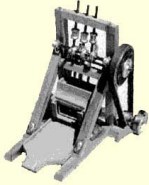




Small Mining Supplies (Pvt) Ltd

Tailings treatment

- Tailings are treated in a
- Vat leach plant, up to eight day cycle due to high grades left in the tailings by inefficient gravity recovery

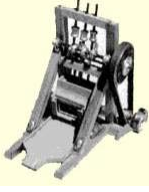


Small Mining Supplies (Pvt) Ltd

Carbon in Solution and Elution

Gold is won from solution onto carbon and then eluted off using Zadra elution. Carbon regeneration via vertical Kiln – miniature of large scale system





Small Mining Supplies (Pvt) Ltd

The next stage — a world first!

- Crushing
- Ball milling
- Knelson concentrator in closed circuit with ball mill
- Free gold and sulphide concentrates to Consep Acacia Reactor
- Direct electrowinning from solution using EMEW cells.
- Highly efficient and contained processing
- Sophistication in miniature, applied appropriately!

- NO MERCURY!



Small Mining Supplies (Pvt) Ltd

Even the guard dogs are happy!

