

CONCENTRATION

Sandy Gray

Sandy Gray, Technical Director and co-founder of Gekko Systems, has made a significant and unique contribution to the international mining industry. He has offered the industry

The equipment invented by Sandy Gray has established the following new principles:

- Innovative with smaller environmental footprint
- Significantly greater energy efficiencies and cost reductions
- Modularity – Gekko's equipment can be dismantled and angled to fit into previously inaccessible or economically unfeasible sites
- Transportability - the equipment can be collapsed into containers and economically transported, providing long-term advantage to clients
- High adaptability engineered and tailor-made for a specific site
- Low capital cost and lower operating costs
- Fully automated and controlled via PLC systems with remote connectivity
- Gekko equipment can be constructed, pre-commissioned and calibrated before transportation, enabling rapid start-up, thereby increasing significant financial returns.



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a platform that maximises the recovery of minerals by using new developments alongside more conventional processing equipment. These developments can be used to eliminate waste and create a high-grade stream of concentrate from which minerals are extracted by gravity separation, or intensive cyanidation. Both methods provide simple, economical, and environmentally responsible means of recovering a range of minerals.

Gray's expertise in mineral processing is evident in his ability to design a range of innovative, state-of-the-art, step-change mineral processing flowsheets. The range of patented equipment includes; InLine Pressure Jig, InLine Leach Reactor, Python Modular Plant, and G-Rex Resin Column. These not only set new standards in design, fabrication and efficiency, but also in improved economic, environmental, and recovery rate benchmarks not met elsewhere in the mining industry.

Advanced gravity separation is an alternative process offered through his innovative equipment compared with the 19th centu-



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ry-designed options currently available. Gray's contribution has been to demonstrate not only the advantages of gravity separation as a viable means of mineral capture, but also when coupled with state-of-the-art, fine crushing technology, it can provide significant economic and energy efficient benefits to customers. One of the latest developments is the modular Python Processing Plant which is inexpensive to operate, and capable of placement in previously inaccessible locations or deep mines. It also has the flow-on benefit when installed underground of reducing the

volume of concentrate that has to be taken to the surface for further treatment to as low as 10%. This is unprecedented in the mining industry and has profound implications for the international mining community. Over 400 InLine Pressure Jigs have been sold into similar systems.



many gold mines (and some silver) utilise this technology to recover gold from gravity concentrates. The introduction of this technology not only increases overall recovery but also has major benefits in security and manual handling. Over 140 units have been installed worldwide.

Since 1996, Sandy has led the mining industry into the 21st century by creating a range of economical, modular and environmentally responsible mineral processing equipment. Sandy Gray is an innovator of note, represents a perfect blend of vision and product development for the global mining industry.

At the time of writing this citation, September 2015, Gray was completing research and development into coarse liberation, resin thiosulphate, coal and other environmental processing opportunities to further Gekko's capabilities.

Established in 1996, Gekko Systems employs 150 people across four continents and has equipment installed in over 45 countries.

Another significant development has been the intensive cyanidation in gold and silver mines. The first commercial InLine Leach Reactor was installed into the Penjom gold mine in Malaysia in 1997. Since then