

LOSS IN WEIGHT BATCHING OF LIME IN GOLD EXTRACTION PROCESS (Easy and cost effective process control)

Kontrols & industrial Weighing was recently approached by a gold mining operation in South Australia.

They were looking for a weighing system for their lime silo.

Upon further investigation by KIW engineers it was determined that the customer was intending to use the weight information to batch the lime in proportion with other materials for use in their froth flotation process.



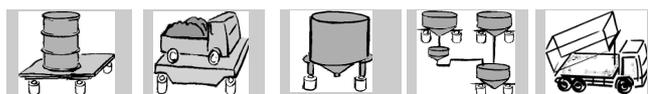
Typical bulk storage silos.

KIW engineers suggested a complete batching solution using tried and true **standard** weigh control equipment designed for batching applications. The alternative was to buy the basic weighing system from us, then use this information to perform the batching control either using a PLC (using custom software) or hard-wired logic.



PR1713 batch controller and PR6201 rocker pin design canister load cell in mounting kit. The pinnacle of weighing and batching technology.

Our solution was more cost effective, had fewer technical, maintenance and management hassles.



Lime is used extensively in the recovery of gold. Ores are combined with lime and a cyanide solution in a froth flotation bath. The cyanide dissolves the gold. Lime maintains proper pH in the cyanide solution keeping it in the liquid phase. If PH in the froth flotation process is not maintained above 12 the cyanide (which is very volatile in liquid phase) is released as the toxic gas hydrogen cyanide.

Loss of cyanide in solution reduces the efficiency of the froth flotation process.

KIW supplied a loss in weight batching system for batching lime in proportion to other components from a 60 tonne silo.

Our system directly controls the lime flow as well as sundry equipment including lime silo activators, water pumps etc.

Feed back signals into our controller ensure correct operation and monitoring of the entire process.

Depending on how the reagents are packaged, the mine will design and construct the necessary equipment to safely dissolve the solid cyanide in a high-pH solution.

Our system is incorporated into this equipment at design stage or retrofitted into existing installations.

Consistent and accurate recipe control is assured.

WHAT FURTHER PROCESSES CAN WE HELP WITH:

- Automated formulation the cyanide solution as well as the lime solution.
- Batching (maintaining feed rate) of the cyanide solution into the metallurgical process stream in proportion to the ore. (dependent on ore properties)
- Off-loading of bulk cyanide.

Chetan Julka

(Field applications engineer)
Chem. Eng.

Please feel free to contact us for further information.

Website: www.kiw.com.au

Email: sales@kiw.com.au.

