

PLANT OPTIMISATION

CASE STUDY

Our Goal:

For three months, Key Engineering and our customer's process team performed analysis and modifications to the existing control system logic in an effort to further improve plant's stability and throughput.

Projects Completed:

- Revise the use of the current constraints.
- Middling PID tuning/Middling SoftStart.
- Product Fines PID control loop.
- Oversize PID control loop setup.
- Ore Break on shuttle
- Tertiary crusher optimisation.

Our Solution:

Key Engineering was involved in analysing current constraint control behaviour and understanding the opportunities to remove virtual bottlenecks created from tuning or underperforming control logic.

By "out of the box" thinking and following theory of constraint methodology we were able to identify and execute logic changes to allow a better plant performance.

Unlocked Potential:

The goal to eliminate virtual bottlenecks and improve throughput was achieved.

This resulted in a capacity increase of 2M tonnes per annum (Approx. \$122m)

Upon completion of the project, further improvements were also scoped and provided to the site team with instructions on how to implement internally.



Wilson Florez

Co-founder & Director
Principal Process Control Engineer

Key Insight:

It was an absolute pleasure to work with a dedicated improvement team who understand their business priorities and goals. Together, we were able to implement solutions that were effective and sustainable.

The benefits achieved by the project were calculated by the client's team.

Key Success Factors



Time



48 Days



People

1 Process Control Engineer



Money



\$87.6K

Tools



Rockwell Automation CitectSCADA

Propose Solution
Following theory of constraint methodology & "out of the box" thinking.

Measure
Results reflected in capacity increase

Identify Opportunities

Three month performance analysis & modifications in tandem with the customer's team

Implement

PLC Modifications took place in order to execute the proposed ideas

Communicate

Weekly Operation Solution Result Reports sent to communicate status & improvement results.