

# INFEED LEVEL BIN BALANCING

## CASE STUDY

key

### Our Goal:

- Minimise bin overloading & infeed conveyor stoppages
- Balance infeed bin levels and have a better control over the level setpoint
- System stability and faster response

### Our Solution:

We worked to improve the current control philosophy to avoid the infeed bins from getting overfilled and also allow the operators to have the ability to control the bin level to a certain set-point.

A mass balancing approach was utilised. By balancing the mass inflow against the mass outflow, the bin level can achieve its set set-point.

The advantage of using mass balancing is that the system reacts much faster to any downstream disturbances. The delay in waiting for the bin to reach the cut-off capacity or level can now be neglected.

### Unlocked Potential:

The number of bin overfilling events due to control strategy has been reduced.

Infeed conveyors stoppages have also been decreased. By means of this reduction, downtime was reduced by at least 2 minutes each time all three upstream conveyors were to re-start.



### Hanh Huynh

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### Key Insight:

“It is all about mass balancing.

If you balance it correctly, it will become stable”

### Key Success Factors

