

TRAIN LOADING AUTO FEED CONTROL

CASE STUDY

key

Our Goal:

- Increase the train loading system performance
- Make the system easier to operate, and
- Maintain the consistency of the performance between different operators

Our Solution:

The Challenge:

The Bin loading system consists of an overland conveyor of 650m to deliver material from the stockpile to two Bins (800T/ea) at the train loadout.

Due to the time it takes to convey the material to the loadout, and the limited bin storage space, the operators have to prefill the system with ore and time the train by counting the wagon as the train is approaching.

As a result, this can take up operator time and also create variation between each operator's reaction time when the feed is turned On and Off manually.

The Solution:

In attempt to resolve these issues, the Feed On/Off control is automated so that it will take care of all the prefill requirements for the operator as the train is approaching.

The first step was for our engineers to understand the current manual operation, then model the process and finally implement the automated process.

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Unlocked Potential:

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By loading the bins and the conveyor belt with the correct prefill amount, customer has reduced the wagon overload & underload events, and the train can ramp up to its set-point speed faster without overloading wagons..



Hanh Huynh

Senior Control Systems Engineer

Key Insight:

"You get a lot of self-satisfaction when you have got an idea, put it together and see it works"



Key Success Factors



Time

1 Week



People



Money

\$4,800



1 Senior Engineer



Tools



Cimplicity