

WAGON LOADING PROFILE CHECK

CASE STUDY

key

Our Goal:

- Make the train load out system easier to operate
- Implement live loading data checks
- Reduce train loading time
- Assist operators to perform multitasking while train loading operation takes place

Our Solution:

The Challenge:

In our customer's train loading facility, the operator was required to manually check every wagon loading profile to ensure it has met the rail specifications.

There are various checks to perform for each wagon profile and those included Gross weight check, Front Bogie & Rear Bogies weight check, Front & Rear bogie Differences check, Number of overload wagons that still met the specs.

As a result, this takes up the operator's time and concentration, hence reducing the operator's ability to perform other tasks more effectively. Since the checks can be easily missed while loading the train, the train manifest has to be re-checked again at the end of train to ensure it has met the specs. If there is any wagon not meeting the loading specs, the train will have to be pulled back to rectify the problem.

The Solution:

To reduce the burden on the operator, the PLC was used to perform all calculations and carry out all the checks. Alarms will be presented to the operator accordingly, so they can take any action if needed.

Unlocked Potential:

With all the checks being carried out and performed within the PLC. The checks are more reliable, faster and highly accurate. The operators no longer need to compute and check each wagon load. They will only need to focus on loading process and if any alarm on the screen is displayed rather than checking numbers.



Hanh Huynh

Senior Control Systems Engineer

Key Insight:

"If it is a repetitive task... then Automate it!"

Let the operator make the decision, but let the control systems do all the work"

Key Success Factors



Time



2 Weeks



People

1 Senior Engineer



Money



\$12K

Tools



Cimplicity

Significant reduction of miss-checking wagon profile

The train is not required to be pulled back to rectify the issues

This has REDUCED the OVERALL train loading time