



全力以赴 全域突破

Project Name:
Film loss reduction by digitalization

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Background

CD has achieved 1.24% PM loss for MU with extreme process control. Top planned loss from packing material MU is film's loss during changeover (PO1 to PO2). Every changeover, for PO1's film, around 20~30 # bags must be scrapped. How to enable film loss reduction without quality risk introducing.

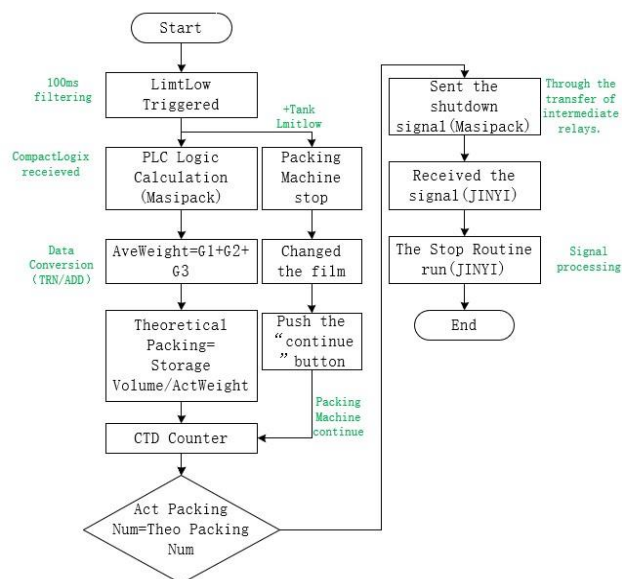
How it works?

When low-level sensor in powder hopper is triggered, the packager stops and the operator change the film. At this time, the PLC logic calculates how many bags of powder the current SKU can produce. After the operator change the film and restarts the packaging machine, the CTD counts the number of bags. When the actual number of bags equals the set value, a shutdown signal for the packaging machine is output—at this point, both the film and powder are used up. All Masipack lines will reapply this solution.

After tests, this optimization plan can save around 5 meters of film during every changeover, 0 touch from operation and achieve 70% film loss reduction during changeover.

What was done?

- Study signal interaction and data transmission between filler and packager.
- Locate the original Data List in filler's PLC to find the weight and output signal.
- Find the idle input/output points of the CPU module and carry out circuit modification to achieve signal transmission.
- Training and continuous optimization based on feedback from online team.



Before vs. After

Before

After

Processing parameters by PLC

Measuring the length of film



600+/Month

Touch#



300min/Month

Touch Effort



1.3\$M/year

PM Loss Reduction