

Use of Simulation as safe platform to test new strategies in Fuel Cell Manufacturing



Client's Challenge

- Develop and Test system-level strategies in a "safe" environment before implementation
- Understand robustness of these strategies to changing market conditions

PMI's Approach

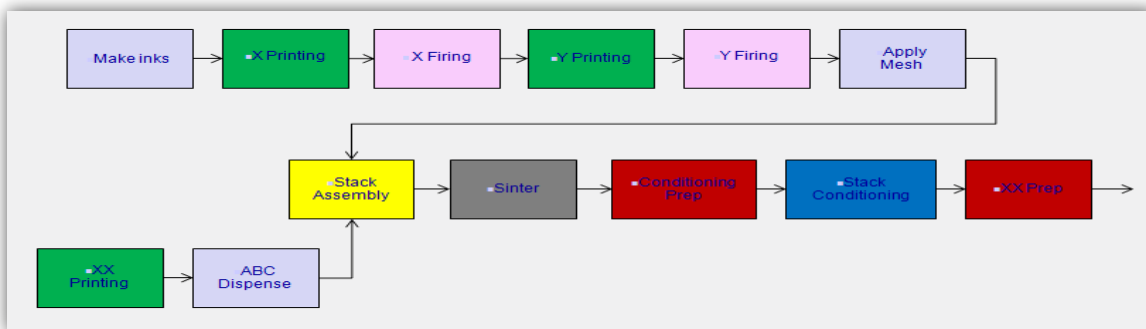
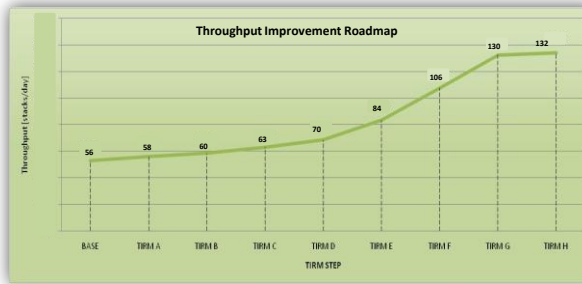
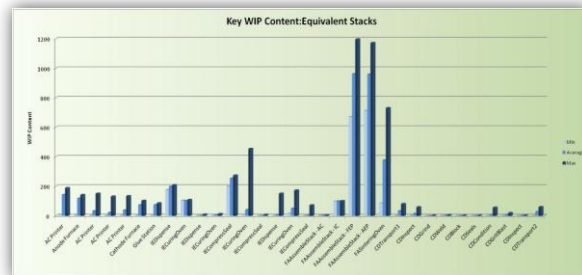
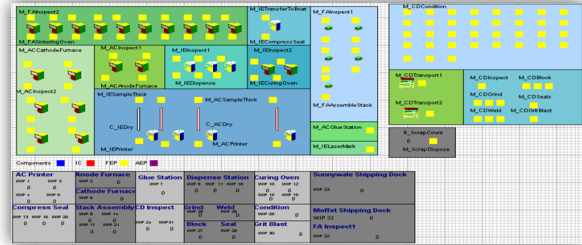
- Data analysis, 2D model building, verification & validation
- Identification of the Bottlenecks using WIP and TIS Data
- Increase bottleneck's capacity to analyse the impact on throughput
- Build Throughput Improvement Roadmap
- Carry out Sensitivity Analysis on buffer capacities

Findings & Recommendations

- Facility was able to produce max. of 310 stacks per week
- Sintering Oven was first the bottleneck
- Inspection and Glue Station together were the second bottleneck, etc.
- Increase in throughput was found for various scenarios
- Best possible strategy was identified and selected for implementation in the plant
- Buffer Analysis helped identify minimum number of boats required to process a batch in furnace

Key Points

- Build Model to test new strategies
- Bottleneck Identification and Throughput improvement
- Sensitivity Analysis on Buffer Capacity



*Data shown here has been modified to protect client confidentiality