

Improving Productivity And Reducing WIP - Plant In China

THE PROBLEM:

High cost of production and the need to free up manpower for new projects

BACKGROUND INFORMATION:

In this case, the assembly line consisted of 90 process steps and 100 operators. The line had several meter lengths of conveyor belts and we did notice that the operators were struggling to cope with the speed of the belt. The sub-assembled parts were transported on small trays and the operators had to pull off the trays from the conveyor belt, work on the parts, and place it back on the conveyor belt. The operators were subjected to high levels of stress while trying to keep up with upstream process steps. Imbalance also created pockets of inventory pile up. This assembly line was identified for a Lean transformation project with a goal of annualized savings of \$500 K.

THE SOLUTION:

We lined up several engineering and Lean Six Sigma improvements which included process simplification, line balancing and error proofing of jigs and fixtures. However, the greatest impact was obtained by removing conveyor lines. With the conveyors gone and each downstream operator pulling parts from an upstream operator, we felt the rhythm of a true “pull”. A pull system is one where goods are built only when there is a signal from the downstream process. This is contrary to the traditional push system where upstream operations push parts to the downstream, irrespective of a need downstream.

THE RESULT:

The change created magic. Not only did we achieve our targets, we also eliminated assembly line noise to create much needed calm. The productivity in terms of parts/hour/person improved from 53 to 43. The WIP reduced from 12000 to 200 pieces. The annualized savings from this project was \$500 K.