

Valves

Issue

Two issues exist with the assembly and testing of valves. First, historical labor charges of 31 hours per unit are slightly more than two times the allotted standards. Second, excessive span times adversely affect shop load scheduling and delivery dates. Minimization is desired to enhance customer responsiveness and reduce inventories.

Breakthrough Strategy

- Measure** A process map, characteristic selection matrix (CSM), and process FMEA were performed. A hypothesis test was performed to determine if span times were affected by shortages and/or discrepant material reports.
- Analyze** It was determined that gage studies were not applicable to the final project, one was conducted on instrumentation to rule it out as the source of increased span time. There are no defined process specifications for span time. A short term capability analysis indicated a potential of 653,586 DPMO.
- Improve** This project did not lend itself to DOE. A strict monitoring process was put into effect until the new system is proven effective. No kits are issued to the floor unless they are complete.
- Control** Implementation of visibility and the refinement of the Kanban system initiated in the valve cell should adequately the span time issues. Manual monitoring of span times will be maintained until confidence is high that the process is functioning properly and is capable of fault detection and correction.
- Results** Changes in business conduct and data gathering were most significant. With proper charging, span times are coming down. Deliveries should average 20 days.
- Savings** Top level assembly cost reduced by 50%; no financial data available.