

Abstract:

The small ball-bearing line at FAG was designed to cut the lead-time from the traditional 6 months to a more customer friendly 1 month. This would ensure the customer would only have to wait a total of one month to receive the part that was currently out of stock. The line was used as a trial to see if the production schedule could be met with the additional demand on time due to changeovers, the changeovers take place at the end of production on one part in order to setup for the next part. With the increased demand on time due to these changeovers, the team's goal was to see if the line was able to meet demand and make production at its current state. The first portion of our project consisted of a time-study. This study allowed the team to see the various operations that were taking place on the line. With this information we could see if there were any wastes that could potentially be removed from the line. The next step in the project was to see if the additional changeovers affected the number of scraped parts. The Current condition showed an expected scrap rate of 3 parts per changeover. Based on the data collected the line had no capability issues and the scrap rate was less than 1 part per changeover. The data did however, reveal an efficiency problem that was significant. Based on the data the recommendations were to shut down the second shift of the line. This would still allow for the production to be met by the first shift. The second recommendation was to write standard work so that the line workers understood what was expected during production hours. The last recommendation was to write standard work for the changeovers in order to eliminate the wastes associated with them. With the data and the standard work, FAG could potentially save an estimated \$129,000.00 annually while still meeting the production needs of the line.