

# Total Productive Maintenance Reduces Equipment Downtime and Lost Capacity



## Background

Leggett & Platt (L&P) Aerospace is recognized as the world leader of fabricated tube and pipe assemblies, precision machining, and gearing. L&P services their customers from a world-class facility located in Middletown, Connecticut, where they perform on-site bending, machining, welding, brazing, pressure testing, FPI, and X-Ray processes.

They are a highly-specialized manufacturer of complete turnkey solutions for the aerospace, power generation, ship and submarine building, and hi-tech industries to over 70 international and domestic customers.

## Situation

Leggett & Platt was experiencing breakdowns in a specific line of CNC lathe equipment which was affecting throughput for a key customer who was also seeking more capacity from L&P. The leadership recognized the impact these breakdowns were having on their productivity and overall equipment effectiveness (OEE).

The company realized the need to improve lost capacity due to significant machine downtime. They not only wanted to increase reliability and productivity but also ensure their workforce understood the preventative maintenance tools required to recognize equipment failures in their early stages and drive operational improvements.

## Solution

L&P contracted with CONNSTEP, Connecticut's MEP Center, to help identify and eliminate or minimize the main causes for their equipment breakdowns. The most problematic of the CNC lathe machines was the focus

## Results for Leggett & Platt Aerospace:

- Increased Sales: \$1,000,000
- Retained Sales: \$650,000
- Retained jobs: 5
- Cost Savings: \$6,500
- Investments Avoided: \$250,000



*The biggest standout of this process with CONNSTEP was implementing a practice of TPM and applying it to our other machines to really help our efforts to minimize downtime, improve capacity, and meet the needs of our customers.*

Alec Martone  
Manufacturing Engineer  
Leggett & Platt Aerospace



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of this effort, employing Lean manufacturing practices to address underlying issues.

Maintenance value stream mapping was performed to improve “wrench time” and eliminate non-value added activities. Opportunities to improve overall equipment effectiveness in the cell line were analyzed, which included determining the percentage of machine availability and level of quality being produced.

A third party working with CONNSTEP helped train the L&P facilities manager and maintenance crew on the basics of Total Productive Maintenance (TPM) to understand how to achieve sustainable results.

## Results

In collaboration with CONNSTEP, L&P was able to see improvements in the CNC lathe machine which was experiencing the most breakdowns and used learned techniques on other machines in the cell line.

Implementing a TPM process significantly minimized downtime of the machine and helped to increase productivity by about 22%. OEE also increased from 39% to 45% and lost capacity was reduced from 61% to 55%. Visual cues and Plexiglas viewing areas on machines were added to more easily identify and assess problem areas.



CONNSTEP, Inc. is a consulting firm strategically helping companies in Connecticut to grow their businesses and improve operational methodologies, leading to increased profitability, improved efficiencies, and creating sustainable competitive advantages in the marketplace.