

Construction and Mining Equipment Manufacturing Case Study

Tactical Engineering Solutions (TES) provides practitioner-based consulting and training services that deliver measurable results for our clients. We work with our clients to understand their objectives, identify solutions that are capable of execution, and develop appropriate plans to achieve, validate, and sustain the intended benefits.

SERVICES:

Operations Performance
Lean
Six Sigma
Rapid Improvement
Logistics
Quality Management
Program Management
Change Management
Collaboration and Time
Data Management
Training &
Certification



Problem: A construction and mining equipment manufacturer was planning for substantial growth, but quality defects were causing delays in throughput, high repair costs and customer concerns. Consequently, the company requested that TES help them develop and implement a Quality Improvement Plan that would reduce defects to their customers and contain defects in-plant, ultimately providing cost savings.

Project Goal:

Gather and analyze internal and external quality data and drive the issues back to the base operations to implement permanent corrective actions and increase throughput and reduce costs.

TES conducted an onsite analysis to determine the depth and scope of the quality issues, and to analyze the production culture to determine the change needed to improve Quality in the base work stations. After the analysis, TES developed a 5-step plan to execute a Quality Improvement Plan:

1. Gather and analyze current state quality and operations/process data
2. Examine existing IT and support systems for support capability
3. Determine how to trace Quality issues back to base operations
4. Implement a Quality Mapping Process and associated training
5. Implement Standard Inspections to stabilize production
6. Validate the expected results to ensure that the process is working

Quality defects were identified, analyzed and organized into data sets to begin containment plans and corrective actions. Assignments were spread across plant Six Sigma Black Belts, Quality Engineers, TES engineers and Production Supervisors to drive improvement actions and establish accountability for each individual quality defect. Continuous Improvement Actions were executed to drive permanent corrective actions.

Benefits of Project:

- Increased Production Velocity (10%) by elimination of rework time in the work stations and in the inspection areas
- Cost Savings of \$2 million dollars/year
- Increased customer satisfaction through increased validation verification and containment of Quality concerns, resulting in reduced customer concerns.
- Progressive decline of Quality defects leading to lower manpower requirements for Auditors & Repair personnel
- Due to higher velocity and less replacement parts needed for repairs WIP and part inventories were reduced

Tactical Engineering Solutions Overview

SOLUTIONS:

Continuous Monitoring
Process Flow Mapping
Workstation Layout
(5S)
Material Movement
Problem Solving
Workgroup Development
End User Training
Supplier Development
Value Stream Mapping
Standard Work
Workload Optimization
Simulation
Six Sigma
Facility Layout
Visual Factory (Andon)
Pull Systems
Enterprise Performance

For more information on any of our products or services please visit us on the Web at:
www.tacteng.com

TES is a Manufacturing Engineering services firm focused on helping our clients develop **and implement** sustainable operational improvements that deliver measurable results. We work in a collaborative manner with you and your team through the difficulties of the implementation phase and we can ensure that changes deliver and sustain improvements for your customers and staff.

Our transformation work focuses on three elements:

- Developing new operating systems to improve productivity and flow using Lean Six Sigma techniques, with limited capital investments
- Creating the performance management system for leaders to monitor and improve performance
- Building realistic, practical capabilities and confidence that our clients will need to continuously improve

Our specialists in Lean Six Sigma can help clients deliver performance by:

- Developing transformation programs (e.g. labor and manufacturing efficiency improvements, process improvements)
- Supporting existing change initiative
- Conducting performance diagnostics
- On site facilitation for Value Stream Analysis and Kaizen events
- Creating performance management systems (e.g., tracking tools, accountability programs)
- Building organizational capabilities
- Executive leadership and coaching
- Zero cost productivity improvements

We bring best practices from leading manufacturers from around the world and a broad base of industries. We measure our success by the sustainability of our impact and the capability we transfer to clients.

About Us

Tactical Engineering Solutions is a veteran-owned/women owned disadvantaged small business, serving the business needs of both private and public sectors. Headquartered in Michigan, our roots originate in the manufacturing industry and as we have grown, our portfolio of resources continues to expand upon this foundation into other industries, to include Transportation, Electronics, Aerospace, Healthcare, Power, Department of Defense, and more.

It is this rich heritage that allows TES Engineering Solutions to support our clients with a first-hand understanding of the challenges that businesses face.

Tactical Engineering Solutions is registered with Dunn & Bradstreet and the Federal Government's Central Business Directory (CBDR)

VISION

TES executes programs that are on-time, on-budget and technically accurate to help our clients reduce overall cost and improve throughput while increasing customer satisfaction.



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