Excellence by Design

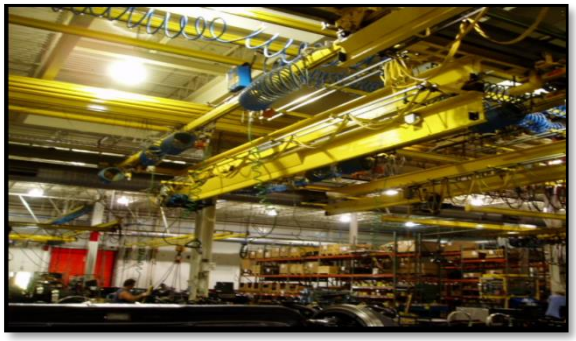
MANUFACTURING

DESIGN SYSTEMS, INC.
Manufacturing Engineering & Consulting

Assembly Process Redesign to Improve Production Rate
Automotive Truck Manufacturer

Project Description

Design Systems, Inc. (DSI) was approached by a major truck manufacturer to redesign their chassis assembly lines. The Manufacturing Group evaluated the current facility, process, material flow, and labor to re-engineer the assembly process. The goal of the project is to improve the operator ergonomics and enhance production rates.

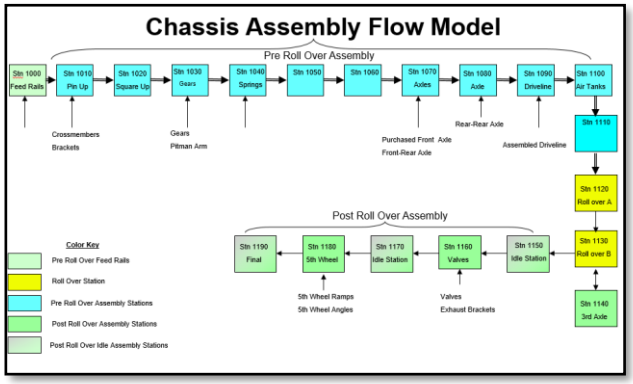


Client Objectives

- Develop multiple concepts of the entire chassis line including advantages and disadvantages
- Develop process flow chart proposal.
- Identify facility, tooling, and equipment requirements.
- Estimate work content, direct labor, and number of workstations.
- Develop size and shape of building additions if required.
- Develop concept facility layout.
- Develop budgetary investment cost.
- Develop high level implementation plan for each concept

PROJECT OUTCOMES

- Developed 5 Concept proposals including detailed process flow diagrams, drawings of assembly layouts, manpower calculations, advantages and disadvantages and budget estimates
- Recommended a production system that allows for mixed model product flexibility within the process to improve production rates
- Improved ergonomics of operator by utilizing an overhead conveyor system to hold chassis frame
- Optimize material handling and line side display of parts by utilizing dual rail feed system to each assembly line
- Increase the production rate by 34% with revisions to the current process and manpower.



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