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SYNCHRONOUS MFG. **(THEORY OF CONSTRAINTS DRUM, BUFFER, ROPE)**

CLIENT'S SITUATION

The client was a Tier I supplier to the Big 3 automotive companies for many years. The addition of Japanese Tier I automotive business demanded Just-In-Time processing (JIT), fast turn-around, and low inventories. The plant tried, but was unable to successfully meet demands without overtime or missed shipments.

PQA'S TASK

Analyze the plant's entire production process. Determine if Synchronous Manufacturing Techniques would be more feasible and give faster results than full-blown JIT, Toyota Production System (TPS) or Lean Manufacturing, determine the possible savings, and identify how it would be implemented.

PQA'S ACTION

Overall plant flow, order entry system, and MRP II system were studied. Bottlenecks in process, scheduling point, and Critical Capacity Constraints were identified. Examples were cited where inventory levels could be reduced to 20% of historic levels. A shortage of fixtures was proven to be crippling to the current product flow. The report included a detailed action plan for starting implementation of Synchronous Manufacturing (drum, Buffer,rope) for Theory of Constraints.

CLIENT'S RESULTS

Theory of operation in one area was completely reversed resulting in 30% higher capacity with a 50% reduction in turn-around time.