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Empowering. Performance.

Steel mill produces $35 million worth of improvements.

Client:

A 100-year old, fully integrated producer of sheet and plate steel

Challenge:

The company had just emerged from bankruptcy. The new management wanted to take advantage of improving steel markets propelled by foreign demand. To succeed, the steel mill needed to revise its production strategy.

Process:

The first step was to take an objective, zero-based look at the entire enterprise to uncover savings. We discovered the mill was capable of producing 36 heats or 9,000 tons of liquid steel per day. The capacity was delivered by either a two-strand Slab Caster or a two-strand Direct Strip Production Complex (DSPC). The later, considered a world-class asset, was known for producing some of the best quality hot-rolled coil in North America.

At the time, the mill's production strategy was to keep the DSPC supplied with steel and run the Slab Caster during turnarounds, or keep it available as a contingency to handle major delays on the DSPC. This allowed only two strands of either caster to produce steel at any given time. Once the sales and marketing team made the decision to focus on selling DSPC coils, we helped the mill harness the full capacity of the DSPC without decreasing the steel supply to the Slab Castor.

Working with the mill's production control, scheduling department and the primary steelmaking operations group, we developed and implemented a new production strategy to reduce the number of practices. The strategy included:

- Aligning ladle steel production with sales and operations to reflect a repeatable and predictable process.
- Originating and instating contingency plans to manage ladle steel practices in queue, so that unplanned delays on either caster would be accounted for and accommodated.
- Instead of running two strands and continually alternating between casters, the company employed a three-strand casting approach that achieved constant steel flow through the production pipeline, eliminating changeover downtime.

Performance Results:

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- In-process slab inventory was reduced by 40%
- Steelmaking backlog was reduced by 45%
- Throughput was increased by 7%
- The value of implemented improvements totaled $35 million

Conclusion:

The new strategy increased steel production through the DSPC, yielding higher revenues by creating more saleable product--an increase of 169 million tons. In addition, a cross-training initiative resulted in some job consolidations, reducing the necessary crew size in the plate and strip mill complex. Finally, better utilization of equipment such as heavy lift trucks, slag pots and haulers saved considerable capital, along with cost-effective storage and delivery of iron ore pellets and refractory material.

"When all is said and done, the value of the improvements should total approximately $35 million," noted the CEO at the end of our engagement. "More importantly, the mill will be more competitive, its customers more satisfied and its future prospects, including those of its union owners, brighter than ever before."