

How a fully integrated steel mill regained its edge by honing its production strategy



This hundred-year-old integrated producer of sheet and plate needed to act quickly to take advantage of improving steel markets temporarily driven by foreign demand. Emerging from bankruptcy with new

management, it turned to USC Consulting Group (USCCG) to help achieve its turnaround objectives of streamlining operations, improving customer service, and restoring investor confidence.

“I have a moral responsibility to make the tough decisions and do the right things proactively to put this company on a solid financial footing,” said the company’s new president and CEO, “and I am committed to doing just that.”

The consultants – known for their operations management expertise – began by taking an objective, zero-based look at the entire enterprise to see where savings could be found, efficiency boosted, and output increased.

USCCG soon discovered that the steel mill was capable of producing 36 heats or 9,000 tons of liquid steel per day. This capacity was delivered to either a two-strand Slab Caster or a two-strand Direct Strip Production Complex (DSPC). Considered a “world-class asset,” the DSPC was known for producing some of the best quality hot-rolled coil in North America.

The traditional production strategy was to keep the DSPC supplied with steel and to run the Slab Caster during DSPC turnarounds, also keeping it available as a contingency if there were major delays on the DSPC. As a result of this strategy, only two strands of either caster would be producing steel at any given time because the DSPC would have to wait its turn when the Slab Caster was running and vice versa.



Key Metrics

In-process slab inventory reduced	40%
Plant-wide on-time delivery improved	4 ppts
Steelmaking backlog reduced	45%
Throughput increased	7%
<i>(Representing an increase of 169M saleable tons)</i>	

This USCCG-led initiative produced significant savings across the entire mill complex.

When a decision was made by sales and marketing to place the emphasis on selling DSPC coils, it became readily apparent that realizing the full potential and capacity from the DSPC, while not decreasing steel supply to the Slab Caster, would become a key part of the plan.

Working in partnership with the steelmaker's own production control and scheduling department and the primary steelmaking operations group, USCCG helped develop and implement a new production strategy. The number of practices was reduced to simplify operations. Ladle steel production was aligned with the sales and operations plan in a repeatable and predictable process. Contingency plans were put into place to manage ladle steel practices in queue to accommodate unplanned delays on either caster.

Finally, instead of running two strands at a time while alternating between casters, the steelmaker began to employ a three-strand casting approach that allowed for constant steel flow through the BSOP while regulating the take-away rate on the two casters. This allowed for increased steel production through the DSPC casting operation, yielding incremental sales and revenues from increased saleable product.

Other improvements included cross training and reducing crew size in the Plate and Strip Mill Complex; avoiding capital expenditures through better utilization of heavy lift trucks, slag pots, and haulers; and more cost-effective storage and delivery of iron ore pellets and refractory material.

In summing up the engagement, the CEO said, "When all is said and done, the value of the improvements should total approximately \$35 million. 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."



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For more information, contact us at 800-888-8872 or www.usccg.com.

