

# Getting More Tons Out the Door: Making Hot Rolling Schedule Optimization Work for You



You've been working in a steel mill long enough, so you know that everything revolves around one thing: tons. You don't need someone to explain the importance of output - you live it every day. More tons, fewer delays, less headache. That's the goal, always.

When it comes to scheduling, we know it's tough to keep things running smoothly with everything that can go wrong: raw material hiccups, machine issues, maintenance windows, and the never-ending stream of product orders to juggle. But at the end of the day, it's all about keeping things moving to get more steel through the mill.

## **THE REAL CHALLENGE: MANAGING COMPLEXITY WITHOUT SLOWING DOWN**

Scheduling Hot Rolling isn't just about moving steel through the mill - it's about keeping everything aligned to make sure production doesn't miss a beat. There's no shortage of factors that can throw a wrench in the works, but you already know that. We get that it's not "impossibly" difficult, but the complexity is real:



### **Process Variability:**

Things rarely go as planned, whether it's changes in raw material quality, unexpected equipment issues, or shifts in customer demand. You've got to adapt on the fly, keeping the tons moving while minimizing disruptions.



### **Temperature Management:**

Keeping the steel at just the right temperature for optimal rolling? It's a constant dance, and you know better than anyone how time-sensitive it is so that reheating or cooling doesn't throw off the rest of the schedule.



### Sequencing and Setup Optimization:

Switching between product types means setup time, and that time can add up fast. You're constantly working to minimize those changes while keeping everything flowing without bottlenecks.



### Production and Quality Constraints:

Maintenance windows, rolling stand availability, mill limitations and downtime - these kinds of constraints can turn a solid schedule upside down and lead to costly downtime. Fitting them into the schedule while maintaining output is a balancing act.



### Resource and Energy Efficiency:

Every roll change, furnace adjustment, or cooling delay eats into your output. Coordinating this with downstream operations to ensure the most efficient production flow possible means finding that sweet spot where everything works together smoothly.



### Siloed Planning and Communication:

In larger plants, planning can get messy when different teams aren't on the same page. Without proper coordination, it's easy for things to fall through the cracks, causing misalignment that slows down production and leads to unnecessary delays.

## TRIBAL KNOWLEDGE: THE SECRET WEAPON (AND ITS LIMITS)

Most of the time, it's not that the tools available are useless; it's just that they don't get the full picture. Your knowledge - built up over years of experience - is the real deal when it comes to figuring out what works and what doesn't. But we also know that it's not just about keeping that knowledge in your head.

Even the best schedulers are up against the wall when it comes to handling the sheer number of factors in play - especially when new equipment or rules are thrown into the mix. Balancing tons of variables in your head, and while your gut knows what works, there are only so many hours in the day.

Furthermore, the growing complexity of modern steel mills - with increasingly automated equipment and stringent energy efficiency goals - means that schedulers now expected to juggle more factors than ever. While a computer system can't replace them, advanced scheduling solutions can serve as an invaluable assistant.



## THE SCHEDULER'S BALANCING ACT

You don't need to be told why scheduling is hard - what you need is a way to make it a little easier without sacrificing the tons you're aiming for:

- 1 Meet Process Conditions:** Achieve the strict quality standards for width, thickness, and hardness, while minimizing waste material and meeting customer expectations.
- 2 Maximize Resources:** Get more out of your resources and reduce downtime by ensuring each roll is utilized to its full potential while maintaining machining quality.
- 3 Minimize Energy Consumption:** Optimize sequencing to cut down on power consumption without sacrificing output, keeping costs down and efficiency high.
- 4 Maximize output:** Bring all of the variables together - roll usage, energy, scheduling constraints - while navigating your specific mill's constraints to meet delivery timelines and keep production flowing smoothly.

What if the tools could work with you, not just for you? Instead of trying to replace your expertise, what if they were designed to amplify it? The reality is, advanced scheduling systems are just that - systems. But they've come a long way. Today's tools can be "trained" with your organization's tribal knowledge, integrating the hard-earned lessons you've learned to make scheduling faster and more consistent, without getting bogged down in the details.

## HOW THE LOGIC FACTORY'S HOT ROLLING SCHEDULING SOLUTION HELPS YOU TAKE CONTROL

### Real-Time Optimization

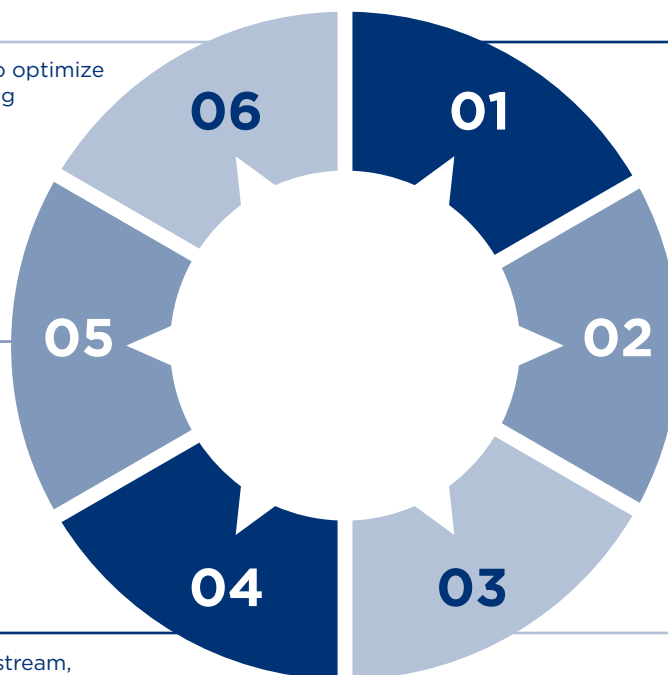
Let the system work with you to optimize every step, from charge batching to sequencing, with detailed configurations that prioritize output without sacrificing quality or energy efficiency.

### Technology Powered by Experience

Your expertise, combined with advanced technology, creates a solution that "learns" from your decisions. This helps ensure consistency and allows less experienced operators to make smarter choices.

### Visibility at Every Stage

Whether it's upstream or downstream, gain visibility into your material flow, machine statuses, and energy consumption, allowing you to make real-time adjustments that keep the schedule on track.



### Real-Time Adjustments

You've got enough on your plate without manually tweaking every schedule when something changes. Let the solution handle it, so you can stay focused on keeping the tons flowing.

### Streamlined Setup

With the right solution, product changeovers won't slow you down. You set the rules, and the solution takes care of the rest, keeping everything running smoothly.

### Output at the Core

The bottom line is simple: more tons. Everything else is secondary. Maximize output by optimizing the things that matter without needing to spend hours recalculating every step.

## KEY BENEFITS OF THE LOGIC FACTORY'S HOT ROLLING SCHEDULING SOLUTION

- 1 Optimize Every Step:**  
From start to finish, streamline every phase of production. Whether it's batching, sequencing, or resource allocation, stay on track and produce more tons in less time.
- 2 Boost output:**  
Leverage real-time data to make informed decisions that optimize processes, reduce bottlenecks, and maximize output.
- 3 Reduce Downtime:**  
Smart sequencing and resource allocation help you reduce downtime and make the most of your equipment, minimizing time and costs.
- 4 Gain Actionable Insights:**  
From charge batching to the final product, track and analyze the metrics that matter most. See how each decision impacts the bigger picture and adjust in real time.
- 5 What if Scenarios:**  
Evaluate multiple scenarios and adapt to changing conditions without missing a beat. The solution ensures you're always ready for whatever comes your way.



### Why The Logic Factory? | Real World Impact

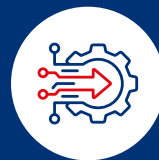
Our solutions work with you and fit the specific needs of your plant. By integrating your knowledge and expertise in the system, you get a tool that respects what you know and provides the decision-support that really helps you handle the complexity of scheduling hot rolling. We've worked with mills just like yours to optimize scheduling, so you can focus on the big picture: getting more tons produced, faster.



Proven track record



Fast implementation methodology



Robust integration



24/7 global support

Optimizing your production scheduling doesn't need to be a solo effort. Together, we can forge a path through uncertainty. We're just a call away.