



Case study

FNsteel Improves Performance with Quintiq Supply Chain Planning and Optimization

Production cycles shortened by 10 percent,
utilization of oven capacity increased to 90 percent

FNSTEEL





“If we really want to profit from the Quintiq software, then we have to take the planning that Quintiq provides as our starting point. Improved planning has already resulted in a number of advantages. First, usage of the heating ovens’ capacity has increased from 85 to over 93 percent. In addition we have been able to reduce production cycles by 10 percent. Temporary stock has decreased by almost half.” – Peter Betjes, Manager After Treatment

The after treatment of steel wire consists of a number of different processes. Depending on customer specific requirements, wire may need to undergo heating, cleaning and/or drawing. To improve the control of this complex process, FNsteel selected Quintiq planning software. To measure the success of the implementation, FNsteel defined targets based on its most important key performance indicators, or KPIs, namely:

- Shorten production cycles
- Improve the usage of heating ovens (productivity)
- Reduce stock
- Improve customer service

FNsteel BV is part of the European steel producer Ovako, which has 18 production sites throughout Europe. The company produced approximately two million tons of steel in 2005 and recorded revenues of €1.3 billion (U.S. \$1.62 billion). Its Alblaserdam manufacturing site mainly produces high quality steel wire, but output is not limited to such. FNsteel’s customers are mainly manufacturers of ball bearings and high quality bolts for the automotive industry.



Functional organization

“Together with Quintiq we performed a quick scan to evaluate the capabilities. This led to a Proof of Concept through which Quintiq would be able to prove that it was capable of solving our problems.”

– Peter Betjes
Manager After Treatment

Peter Betjes has been the manager of after treatment at FNsteel Wire since 2003. His department treats steel wire based on specific product, quality or customer requirements. Such treatment can include cleaning (to remove oxides), heating (to improve the structure) or drawing (to result in a specific diameter). “This is a complicated process. Some products are ready after cleaning while others have to be heated or drawn. Wire may also need to be cleaned again after heating.” When Betjes was promoted to manager of after treatment, FNsteel was managed based on a functional organization. “In the daily routine there was no link between treatment steps. We used a rough plan generated from the orders we received. Any detailed planning was done on the shop floor based on practical knowledge. The main disadvantage of this approach was that temporary stock accumulated easily. Wire that needed an additional treatment remained idle until another order was finished. As a direct result, we could not use our full capacity, hiking up our cost of heating energy.”

Betjes initiated a program, Compass, that moved away from functional organization to improve company KPIs. “With this Compass project we wanted to realize a number of things: more flexibility in production, higher productivity, better customer service and less inventory. This meant we had to take the after treatment of wire as a starting point instead of the different treatment processes. As such we had to adjust our organization.

It was obvious that our existing planning solution did not offer the required functionality.” Betjes researched his options on new planning solutions and was introduced to Quintiq. The company’s extensive experience in the metal sector was reassuring that this solution may well be able to accommodate FNsteel’s specific process complexity. “Together with Quintiq we performed a quick scan to evaluate the capabilities. This led to a Proof of Concept through which Quintiq would be able to prove that it was capable to solve our problems. Quintiq succeeded and in January 2006 we started implementing the software.”



Benefits of implementing Quintiq

FNsteel first implemented the Quintiq solution at its heating operation. Coils of wire are heated in ovens at a temperature of 800 degrees Celsius. The more coils are loaded into ovens simultaneously, the more efficiently FNsteel uses energy. Based on this particular process, Quintiq is able to make an optimal plan for all processes. Shop floor knowledge was integrated in the Quintiq solutions for this purpose. "This obviously affected the way we work in the company," says Betjes. "If we really want to profit from the Quintiq software, then we have to take the planning that Quintiq provides as our starting point."

Improved planning has already resulted in a number of advantages:

- Increase in productivity from 85 to over 93 percent
- Reduction in production cycles by 10 percent
- Decrease in temporary stock by almost half
- Improved customer service: Clients are now able to track the status of their orders through the client information system FUN SI, which is updated by Quintiq. This was not possible prior to implementing the software
- A more relaxed planning department, resulting in more time to monitor and control production based on KPIs

Future

The implementation of the Quintiq planning software at FNsteel provides the basis for further optimization of several other production processes. One of FNsteel's interests lie in the improvement of traceability using barcoding. "This will enable us to inform our clients better on the status of their orders. In addition it enables us to improve the usage of our ovens as we can use barcode information on the form factor of coils that can be entered into Quintiq. The Quintiq system subsequently calculates exactly how an oven can be filled optimally with wire." Quintiq will continue to support FNsteel and its IT department through further implementations that optimize operational planning and production across the company.



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