



## *Luvata realizes a payback in less than eight months with Quintiq*

GRADUS HUMMELINK,  
DEPUTY MANAGING DIRECTOR,  
AT LUVATA:

"If we had a machine breakdown in the past, we did not have visibility into the consequences for the production process. We had the situation that during a machine breakdown we did not have supply of materials. Both these issues have been solved by using Quintiq. This enables us to have an increased production output, resulting in a better way to anticipate the delivery times for our customers."

"Our material return used to be 60%. By using Quintiq, we have been able to improve this with 1%. In terms of added value this means we are gaining 400,000 Euros every year."

### COMPANY PROFILE & MISSION

Luvata is a versatile metals group operating worldwide. In its business, Luvata focuses on base metals production, stainless steel, copper products and technology. In its traditional areas of core competence, Luvata is recognized as one of the industry leaders. This position is also the one from which the Group derives its mission: "Our task and mission is to put our expertise as both a producer and technology supplier to use in responsible metals production and thus to contribute to meeting the world's need for metals." In all business operations, Luvata underscores the crucial importance of its customers, good profitability and responsibility for the environment. The Group's core values also emphasize continuous improvement of competence as an essential prerequisite to securing competitiveness. This case study deals with the location in The Netherlands.

### THE PRODUCTION PROCESS

The production process consists of three main steps:

- **Casting.** Luvata has developed a continuous casting process which produces coils of approximately 25 mm thickness. Immediately after casting they are rolled down to a small set of standard thickness between 0.9 and 2.8 mm. Depending on the product to be produced, coils are then annealed in batch or strand furnaces. The casting shop produces so-called master coils of fixed size (4 tons in Sweden, 25 tons in The Netherlands)
- **Rolling.** In the rolling area, master coils may be rolled and annealed several times before being slitted to end customer specifications. As specifications may differ in alloy, temper, thickness, width, inner core diameter, type of inner core, lubrication, etc., the number of different product types is enormous. An extra complication in the

plant in The Netherlands is the usage of large master coils (25 tons). To make efficient use of these coils, different product types may be produced on the same coil without dividing the coils in smaller coils. Thus, at any point in time, a single physical coil may contain several coil segments having different specifications in terms of temper and thickness. At the slitters, multiple end-customer orders may be combined to be slitted together in order to optimize the usage of the available coil and reduce the amount of side scrap

- **Special products.** Some of the slitted coils require further process steps, such as applying a layer of tin to the copper of brass alloy and winding thin strips of copper on spools.

### THE CHALLENGE

Every week, the production site in The Netherlands produces about 1,200t of copper and brass strips to be used for the automotive and electronics industry. Gradus Hummelink, Deputy Managing Director, says: "It became a tremendous task to make sure that the available production capacity is used with the maximum efficiency without the help of the detailed planning system from Quintiq."

Luvata experienced an increase in the complexity of their production process. More orders with a smaller average order quantity makes the utilization of the 25 ton master coils a more complex combinatorial problem. Also, to improve delivery performance, ensuring that the right amount of material is produced becomes increasingly important. Furthermore, whereas historically, the casting shop produced master coils to stock, it was recognized that the whole operation would benefit if all process steps were scheduled using a single optimizer, including the demand planning for the casting shop.



HENDRIK PETERS,  
INFORMATION SYSTEMS  
MANAGER, AT LUVATA:

"We needed an intelligent solution to optimize production.

To prove the power of their technology, they simply said, 'We'll solve your slitting problem to demonstrate the power of Quintiq! First, we thought they promised too much, but within two weeks the slitting application was live reducing scrap with 70% for a number of articles. This was so convincing that there was no doubt: Quintiq is the solution to optimize our production."

## SOLUTION

It was soon recognized within Luvata that there was a need to have an intelligent planning system, capable of handling all the different business rules and constraints that are inherent to its production process. The reason for choosing Quintiq was made after evaluating various other well-known supply chain packages. Gradus Hummelink adds: "There are many planning software packages on the market today, but very few with the flexibility that we need to control the ever-changing bottlenecks in our production process. That's one of the reasons we selected Quintiq."

In the selection process, Luvata asked all participants on the short-list to take the most complex part of the planning problem, which in the case of Luvata was their slitting process, and show with a proof of concept how the software was capable of handling this. Gradus Hummelink, says: "From the beginning we saw that Quintiq was able to provide us with a very flexible scheduling system, particularly the proof of concept that they put together within two weeks was very impressive." Hendrik Peters, Information Systems Manager, adds: "The proof of concept allowed us to assess whether a supplier was able to solve the planning question at hand and how much time they needed." The integration with the ERP package of SSA Global (BPCS) was realized within one afternoon and was no issue according to Luvata. Examples of data that are being integrated are the shop orders for end products, article specifications, routing, bill of materials, etc.

## RESULTS

- Increased production process visibility and control
- Increased production output
- Added value of almost 500,000 Euros per year.