Aleris Koblenz

Case Study

# *Aleris Koblenz Collaborative Scheduling*

GERD REFFLINGHAUS, MANAGER PRODUCTION PLANNING & LOGISTICS: "Our ability to react has significantly improved through the implementation of this collaborative scheduling solution – our people can work much more effectively."

Aleris Aluminium Walzprodukte GmbH is part of the Aleris Aluminium Rolled Products group, one of the largest producers of rolled and extruded aluminium products worldwide.

Based in Koblenz, Germany approximately 150,000 tonnes per year of rolled aluminium products in the form of coils, sheets and plates are produced. End-use applications of the products include aircraft, heat exchangers, mouldings and tools, shipbuilding and commercial vehicles.

## THE KOBLENZ PRODUCTION PROCESS

The production process at Koblenz includes multiple alloy casting stations, homogenisation & preheating ovens, together with scalping, brazing and hot rolling operations.

Within this process are a large number of operational constraints relating to, for example, alloy and size restrictions, campaign/sequence sizes, and treatment times, which makes the detailed planning and scheduling of operations a complex, time consuming process.

## PROBLEMS & CHALLENGES

Some of the problems that Koblenz faced in scheduling their casting to hot-rolling operations included the socalled "Domino-Effect", where unexpected plant events at one resource adversely impact other following production steps; that scheduling was only performed on a weekly basis and was thus unresponsive to changes in plant status; that there was little visibility of plantwide schedules and that there were no real tools to support automatic schedule generation.

## THE SOLUTION

Quintiq & 4Production were given the task of providing an advanced scheduling tool which could help Koblenz create better quality schedules and, address the problems they faced. The approach taken was to implement a collaborative scheduling model, which coupled together the schedules of the individual resources, so that they would effectively act as one "single" resource. Further specific benefits that were identified also included the reduction of work in progress material, increased machine throughput, increased resource utilization and improved material assignment.

The software tool selected was the Application Suite from Quintiq which offered the necessary functionality, usability and flexibility to provide Koblenz with the solution that they needed. The Quintiq software, coupled with 4Production's knowledge and expertise in the metals industry, enabled the rapid implementation of the solution, which went successfully live in production in September 2004.

MICHAEL JÜRGENSEN, MANAGER SCHEDULING: "The tool provides us with complete visibility of our scheduled orders and enables us to very quickly generate good, optimized schedules."

## THE BENEFITS

The expected benefits from the project include:

- Reduction of Work in Progress material in the plant, through reducing the production leadtime
- Improvement in the scheduling of the slab supply for hot rolling – coupling the casting and hot rolling operations, so they act as a "single" resource
- Greater visibility of the actual plant operation status
- Better visibility of schedule & production constraints and problems
- The ability to simulate alternative production scenarios so that better schedules can be created
- Reduction of hot rolling ingot inventory levels
- Simplification and standardization of the scheduling workflow.

**Headquarters Quintiq,** Bruistensingel 500, 5232 AH 's-Hertogenbosch, The Netherlands
Phone: +31 (0)73 691 07 39, Fax: +31 (0)73 691 07 54, E-mail: info@quintiq.com, www.quintiq.com