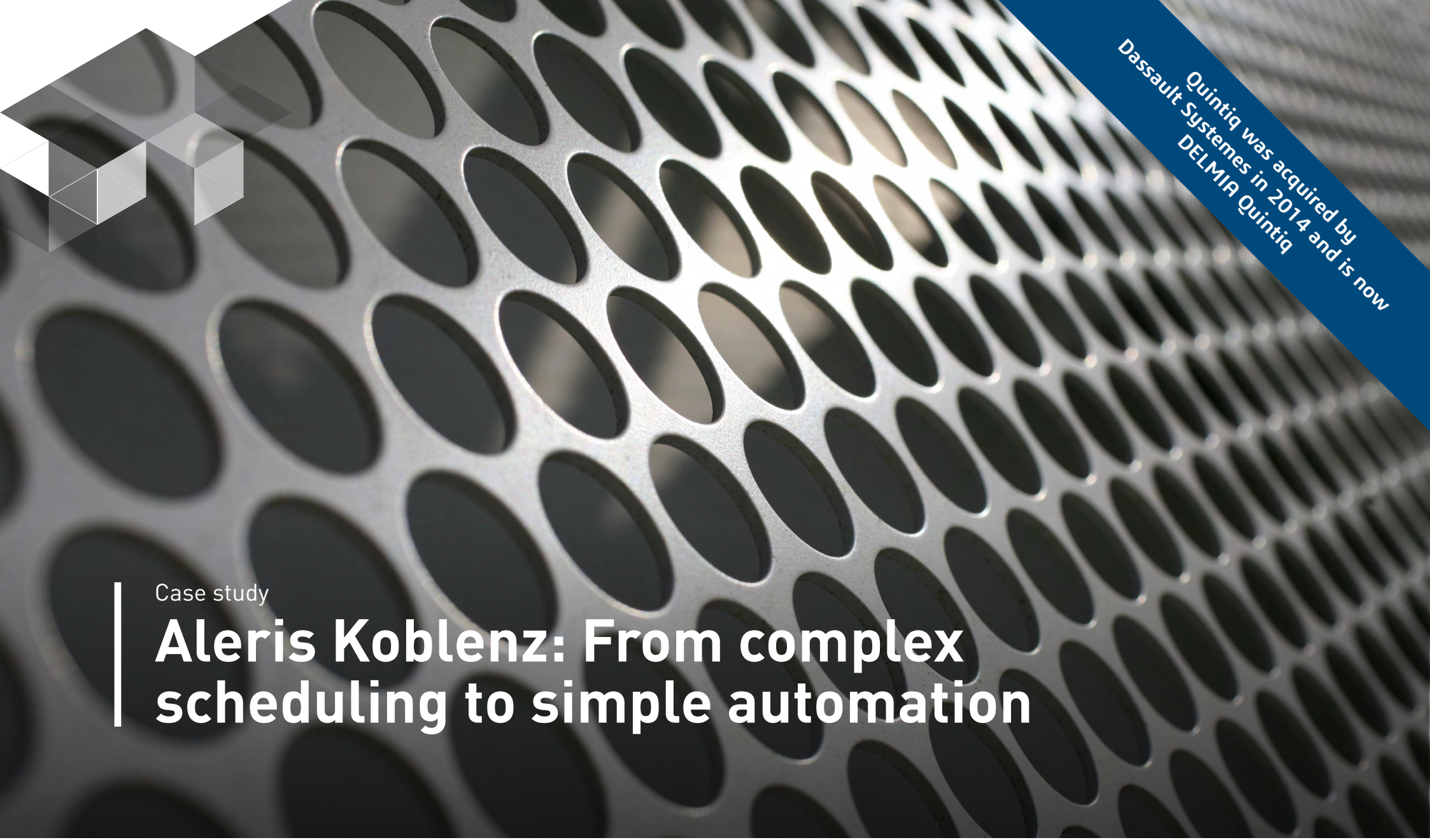

Quintiq was acquired by Dassault Systemes in 2014 and is now DELMIA Quintiq

Case study

Aleris Koblenz: From complex scheduling to simple automation

ALERIS KOBLENZ

QUINTIQ

"Our ability to react has significantly improved through the implementation of this collaborative scheduling solution – our people can work much more effectively."

– Gerd Refflinghaus
Manager of Production Planning and Logistics

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, Aleris produces approximately 150,000 tons per year of rolled aluminium products in the form of coils, sheets and plates. End-use applications of the products include aircraft, heat exchangers, moldings and tools, shipbuilding and commercial vehicles.

The Koblenz production process

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

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

Challenges

As such, the Koblenz process was not without challenges. From scheduling their operations for casting to hot-rolling operations, problems included:

1. The so-called "Domino-Effect," where unexpected plant events at one resource adversely impacted following production steps
2. Weekly scheduling that was unresponsive to changes in plant status
3. Little visibility of plantwide schedules
4. Lack of tools to support automatic schedule generation

The solution

Quintiq and 4Production were asked to provide an advanced scheduling tool that could help Koblenz create better quality schedules and address the problems they faced. The approach was to implement a collaborative scheduling model that coupled the schedules of the individual resources to effectively act as one "single" resource. They were also looking to achieve a reduction of work in progress material, increased machine throughput and resource utilization and improved material assignment.

To meet the requirements, they chose Quintiq's Application Suite software. The tool offered the necessary functionality, usability and flexibility to provide Koblenz with the solution they needed. The software was implemented into production in September 2004.

> "The tool provides us with complete visibility of our scheduled orders and enables us to very quickly generate good, optimized schedules."
>
> – Michael Jürgensen, Manager, Scheduling

The benefits

As a result of implementing Quintiq's software, Koblenz experienced the following benefits:

- Reduction of Work in Progress material in the plant through reduced production lead time
- 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 and production constraints and problems
- The ability to simulate alternative production scenarios so that better schedules can be created
- Reduction of hot rolling mold inventory levels
- Simplification and standardization of scheduling

"Our ability to react has significantly improved through implementation of this collaborative scheduling solution - our people can work much more effectively," concluded Gerd Refflinghaus, Manager of Production Planning and Logistics.

QUINTIQ

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