



TRIBOTEC

Case Study

Challenge

Tribotecc, one of the world's leading manufacturers of synthetic and natural metal sulfides for friction stabilizers, needed greater control and visibility of its supply chain. The aim was to move from a manual to an automated production scheduling and planning approach, drawing data from every aspect of its business to plan and optimize its complex supply chain. The aim: to make profitable decisions and improve delivery performance while reducing stock.

Solution

Tribotecc now uses DELMIA Quintiq for demand and procurement planning as well as production scheduling. The solution provides industry-specific capabilities that allow Tribotecc to model, plan and optimize its complex production chain from end to end through sophisticated what-if scenario planning, collaborative decision-making, and full data transparency.

Benefit

DELMIA Quintiq brings visibility to Tribotecc's entire sales, purchase and production chain. The solution empowers the manufacturer to increase productivity, shorten product lead times and reduce inventory for involved departments by 40% through accurate forecasting and stock level insights. Tribotecc's delivery performance is now upwards of 99%.

A WORLD LEADER IN HIGH-PERFORMANCE METAL SULFIDES

Get in a car or board a train, plane, or bus from anywhere in the world and chances are that at least one of Tribotecn's products will accompany you on your journey. The leading Austrian manufacturer produces high-performance synthetic and natural metal sulfides. These are used as functional additives in brake pads and clutch facings as well as lubricants, polymers, powder metallurgy and abrasives across a wide range of fields globally.

Tribotecn's market-leading reputation is built on its premium products and solution-oriented approach. It uses a unique, patented synthetic manufacturing process designed to guarantee the production of metal sulfides in any required composition, quantity and of consistent quality. In the friction industry, for example, Tribotecn's friction stabilizers and comfort additives are used by automotive manufacturers to extend the durability and performance of disc brake pads and drum brake linings. But when it comes to Tribotecn's customer service, friction free is the mantra that drives its approach. The company supports its customers through a reliable supply of raw materials, intelligent processes and high-quality products, and embraces the latest technologies to optimize its operations, including its production planning.

Annually, Tribotecn produces an average capacity of 25,000 metric tons of metal sulfides. For many years, it relied on the rough information coming through from its sales team to plan production. While this approach gave an indication of the quantities of products required in a given timeframe, the company's manufacturing plant lacked visibility of what was specifically required and in what form. It meant that the production setup had to change almost daily to keep up with demand, and this impacted changeover, work and lead times.

Andreas Legner is plant manager and Six Sigma Black Belt at Tribotecn and one of his key responsibilities is to plan the company's production processes and material flows. He knew there must be a better way and sought a more sophisticated planning solution that would deliver true operational visibility and accurate forecasting. Legner found the answer in DELMIA Quintiq.

"We were looking for a reliable, world-leading partner with an established planning solution on the market that would give us complete control and full data transparency," Legner said. "DELMIA Quintiq met all of our key requirements."

A PLANNING TOOL SUITED TO THE CHEMICAL INDUSTRY

DELMIA Quintiq's rich functionality and flexibility makes it ideally suited to the needs of the chemical industry. The DELMIA Quintiq team worked closely with Tribotecn to determine its business needs, understand its processes and customized the planning solution accordingly to tackle the following challenges:



✓ Challenge One

"We produce some products in bulk and it's only at the end of the production process that we decide how it's going to be packaged," Legner said.

✓ Challenge Two

"From some raw materials we use, only about 20% is used for the main product, the rest is by-product, which we use for several other applications," Legner said. "If there's a rise in demand for the main product, we will end up with more by-products. We need the ability to plan ahead and determine if we can use this by-product for other applications or whether we need to use alternative routing."

✓ Challenge Three

"We work with some materials that require so-called rework inputs," Legner said. "We need to be able to calculate this, know how much we need to keep in stock and ensure automatic replenishment, so we don't impact production."

✓ Challenge Four

"We work with more than 50 raw materials, producing 220 finished goods and 50 semi-finished goods," Legner said. "But we have overlapping process steps and up to five steps per product, and 15 different lines. So, we needed a specific sequence which reduces loss and changeover times."

DELMIA Quintiq worked closely with Tribotecn to understand exactly how it operates and was committed to helping solve these challenges.

"They demonstrated the platform's (DELMIA Quintiq's) integration capabilities, transparency and flexibility," Legner said. "It meant the software could be tailored to manage the many specific requirements of both the chemical industry and Tribotecn, such as by-products, alternative raw material input, loss, lot optimization and sequencing, over various planning horizons, allowing us to achieve our goals."

SUPPORTING TEAMS TO THINK AHEAD

Today, Tribotecc splits its planning processes between three departments, all supported by DELMIA Quintiq. Sales handles the product forecasts and estimate demand; purchasing provides the latest updates on raw material lead times and target stock, and ensures the raw materials meet Tribotecc's quality requirements; and production monitors the workforce, equipment and work order statuses.

"Because of our lead times, production is planned for up to six months and for those months I have the exact data to ensure we have enough raw materials to work with," Legner said. "DELMIA Quintiq does all the planning work and delivers the plan that we then work to."

DELMIA Quintiq provides decision support at every stage, allowing each team to analyze almost limitless options and recommend the optimal course of action. From the very beginning, then, Tribotecc can build accurate and cost-efficient schedules and optimize specific sequences, all aligned with its business KPIs. Now, all three teams work towards a plan which is updated every fortnight, bar the rare exception when they must replan for an unanticipated customer order.

"This forms the basis for our production, and it keeps us all calm," Legner said. "Everyone is now able to work with confidence, knowing that we won't be changing our production setup every day."

FULL OPERATIONAL VISIBILITY

DELMIA Quintiq brings full visibility to Tribotecc's entire sales, purchase and production chain, and ensures a seamless data flow from one stage to the next.



"I had a problem with our data for years in terms of its reliability," Legner said. "Now, I can say that all the planning outputs we work with, we can trust. What I really like about DELMIA Quintiq is the transparency it provides. You can follow all data from the customer forecast all the way to production demand and through all the production steps to the very first input. This system really works for us."

Backed by DELMIA Quintiq, Tribotecc now benefits from accurate forecasting and full visibility of stock levels, empowering it to increase productivity, reduce lead times, decrease inventory, reduce waste and optimize lot sizes and packaging.

"Through better organization, we've reduced our inventory by about 40%," Legner said.



"Despite a replenishment time of up to 120 days for raw materials, we are able to deliver finished products almost just-in-time with DELMIA Quintiq, as we've shifted from made-to-order production to make-to-stock production. We've boosted on-time delivery performance from 85% to upwards of 99%."

— Andreas Legner, Tribotecc

During the COVID-19 pandemic, Tribotecc used DELMIA Quintiq to adapt its operations, helping to protect employees and ensure production availability.

"Despite high demand and difficulties with raw materials supply, we kept a delivery capability of 99% and were able to strengthen our image as a reliable partner with our customers," Legner said. "Throughout, DELMIA Quintiq supported us with transparent planning. We introduced an additional four shifts in our operations, which run 24/7; we adapted to short-term changes and shifts in demand; and we carried out partial daily planning instead of 14-day planning."

Looking ahead, the company plans to integrate DELMIA Quintiq with its enterprise resource planning system to further connect its business processes. But already, the solution has made a big difference to the way Tribotecc operates.

"We wouldn't be able to plan our entire operation as effectively as we do, connecting everyone across our different departments from sales to the shop floor without DELMIA Quintiq," Legner said. "It's a key tool to the success of our business."

Focus on Tribotecc

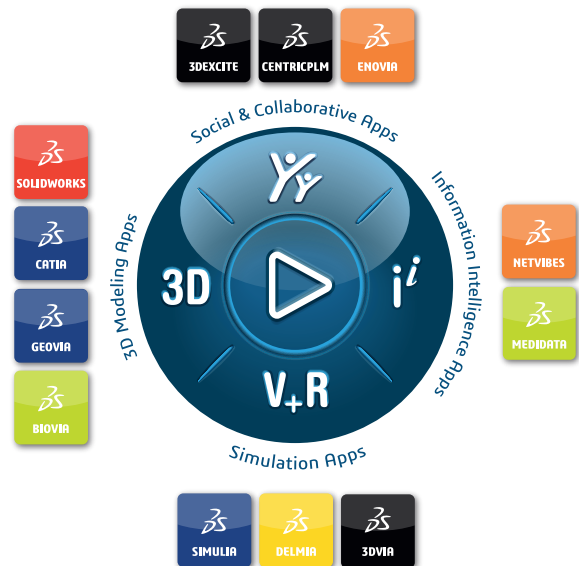
Tribotecc, based in Arnoldstein, Austria, is the world's largest manufacturer of special metal sulfides. As functional additives, they are used in brake pads and clutch facings as well as in lubricants, polymers, powder metallurgy, abrasives and batteries across a wide range of fields globally. Tribotecc has also gained world leadership in technology and innovation. The company develops, manufactures and distributes both synthetic and natural metal sulfides using a unique, patented synthetic manufacturing process.

For more information
www.tribotecc.com

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