SYNCMANUFACTURING SOFTWARE CASE STUDY

Pyrotek is a leading international company supplying aluminum, foundry, glass, zinc, steel, noise control and hearth customers with performance improving technical products, integrated processing systems and consulting services worldwide. Privately owned since 1956, Pyrotek offers industry-leading technical expertise and global resources with 66 locations in 31 countries.

Pyrotek®

Fast growing ETO manufacturer synchronizes production with demand, driving on-time delivery and increased throughput

In the global aluminum industry, Pyrotek is a recognized world-leader for equipment, consumables and consulting related to the refining, melting, processing, and casting of molten aluminum. Pyrotek's mission is to provide innovative solutions to customer needs utilizing global resources. Nearly all these customers require custom engineered-to-order (ETO) solutions.

Caleb Pecola, Supply Chain Manager for Pyrotek added, "We are an engineer-to-order manufacturer of capital equipment. "Every time we build something, it's new to us. We are able to base our new designs from previous projects, but there is often a new feature or specification that needs to be considered - and that presents a challenge."

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Pyrotek Facts:

- **60 Years of Innovation**
- **2700 Employees**
- **60 Offices in 30 Countries**
- **5 Research Centers**

The sheer number of projects being handled at one time requires a careful and critical understanding of how many materials go into projects, the schedule, and lead times. Pyrotek's rapid growth made it increasingly challenging to plan a production schedule that would maintain any reasonable on-time delivery performance.

Growing pains

Pecola noted, "The company has grown multiple times over the last five years; taking on more product lines and acquiring more complex equipment. If you go back ten years, the projects consisted of some steel work and our pre-cast refractory shapes, which is our core business. Now we have incorporated controls, pneumatics, hydraulics, combustion systems, and electrical heaters - we have really broadened our product offerings."

The company scheduled using spreadsheets and homegrown tools. Tom Howard, Division Manager for Pyrotek Refractory Systems commented, "As we continued to grow and the projects got more complex ...it got to the point where our homegrown tools weren't helping anymore." To support their growing complexity, they began evaluating other technology options, but couldn't find a solution that provided the flexibility to work the way they needed.

"As a company, we absorbed a lot of growth. We introduced new product lines and added a huge number of people very quickly who had very little experience in our organization. That forced us to work in a very reactive mode.

SyncManufacturing software helped us to be more compliant and disciplined. As a result, we are operating better as an organization."

Tom Howard
Pyrotek Division Manager

Pyrotek required a planning and scheduling system that would automate the production process, align their resources and adapt in real-time to changes in demand. To provide this level of control, the system had to effectively synchronize their data, people, materials and machines - all the resources key to driving flow throughout manufacturing and the extended supply chain. Pyrotek was also committed to their ERP (enterprise resource planning) investment and wanted a system that would integrate with it to exchange real-time order information.

A colleague familiar with SyncManufacturing (by Synchrono®) knew that this production planning, scheduling and execution system for demand-driven manufacturing environments could prove to be the answer.

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Pecola shared that the first demonstration of SyncManufacturing was very promising, leading the company to take the next step. They were cautiously optimistic. Decision-makers included the entire team reporting to Tom Howard and other business leaders. "We wanted universal buy-in, and involved our CFO, Director of Information Systems, and the General Managers for Engineered Systems and Manufacturing in the evaluation process."

> "There are a ton of people who profess to know what Lean is, including consultants who make a good living and do not understand a thing about it. What I knew in the first five minutes with the Synchrono team was they absolutely knew what they were talking about. The level of expertise and understanding of Lean principles is there. They know what is really important and when we describe a problem, just once, Synchrono is there helping to solve the problem. They get it and they bring value."
>
> Tom Howard
> Pyrotek Division Manager

Howard added, "When I first met John Maher (Synchrono **Vice President of Product Strategy)**, I knew in the first five minutes that he absolutely knew what he was talking about. And that's what sold me. This guy *knows* his stuff. The same is true for Kirk Studdiford (Synchrono Director of Client Services) as well as other members of the Synchrono team. They have a high level of expertise; they understand what Lean is and the principles that are important. The knowledge and understanding of the Synchrono team is just outstanding compared to what you find in most places."

Surprises after the go-live of SyncManufacturing software

Pecola's biggest surprise: "It works exactly how it was demonstrated! That was a big surprise! It works so well it forced us to work with real discipline …which was a bit of an adjustment for us."

Howard also commented, "As a company, we absorbed a lot of growth. We introduced new product lines and added a huge number of people very quickly who had very little experience in our organization. That forced us to work in a very reactive mode. SyncManufacturing software helped us to be more compliant and disciplined. As a result, we are operating better as an organization."

Clean data in…

When asked about best practice advice they would give others going through a similar implementation, both Pecola and Howard stressed the importance of taking time to ensure you are inputting good, clean data.

"We help clients by identifying the data that matters and actually drives performance", commented Kirk Studdiford who led the software implementation team from Synchrono. "We don't take the typical Class A MRP approach – our customers don't need to add people to accomplish this work. Rather, our team works in step with customers to understand the data that needs to be in great shape, the data that needs to be good enough – and how the data interacts."

SyncManufacturing software is a very powerful tool that drives flow from order inception to production delivery. As such, through the data it gathers and generates, it provides insight into a variety of areas, including constraints management, inventory replenishment, materials availability, continuous improvement and more.

"We have become much more efficient in our procurement efforts, allowing us to work much more profitably at relatively the same revenue and sales throughput."
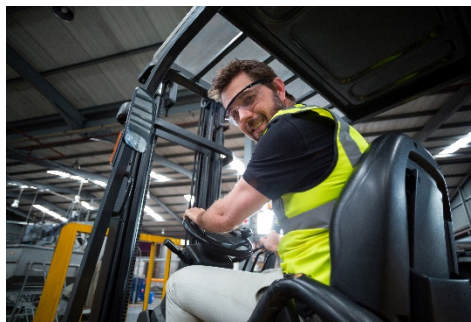
Caleb Pecola
Pyrotek Supply Chain Manager

…Great results out

Pyrotek planners went from constantly updating spreadsheets that would quickly become obsolete to working more proactively with their increased capacity. SyncManufacturing eliminated time-consuming leg work, freeing planners to work on more strategic initiatives. Now they have a system that makes automatic – and dynamic – adjustments to the schedule so they can focus on leveraging their added capacity as well as reserving capacity for future projects that have been quoted.

Pecola asserted that procurement analysis previously represented one of their greatest challenges: "Our ERP can generate a static report of material requirements, but it has limitations, including an inability to sort." The functionality in SyncManufacturing allows the procurement team to work more effectively, with greater ability to monitor, segment, sort and export supplier information. "We have become much more efficient in our procurement efforts, allowing us to work much more profitably at relatively the same revenue and sales throughput."

Supplier satisfaction

Suppliers are happier too since Pyrotek can extend longer lead times based on their newfound ability to reliably predict, and automate inventory replenishment. Today, both Pyrotek and their suppliers benefit from real-time visibility into the replenishment process.

At a post go-live meeting with the CFO and other SyncManufacturing decision-makers, Pyrotek reported a reduction in the number of purchase orders over the past year by approximately 10%. That best practice process improvement helped the company sprint toward a rapid return on investment (ROI). "We value solutions that consider all layers of operations – the person doing procurement, the person in receiving, accounts payable, etc. When you consider the administrative costs of generating a purchase order, just the reduction in PO's alone represents a huge savings," remarked Pecola.

Managing ETO complexity through ongoing continuous improvement

In the ETO space, there are no technology cure-alls or panaceas. Howard acknowledged, "Our projects cover everything from a $200 replacement part to a multimillion-dollar piece of capital equipment – and everything in between. The scope of jobs are vastly different and the design is always custom, so you must

be in the details all the time. With that many stops and flow-paths - even with a tool as good as SyncManufacturing – sometimes it becomes complex to keep track of everything. The detail is there, but you need to be on top of it virtually in real-time to not miss something."

"The price of the software is very fair", continues Howard, given flow improvements and the increase in key company metrics including on time delivery (OTD), work in process (WIP) and inventory turns. "This experience for us went beyond the software to transforming our culture during a period of rapid growth, forcing us to get our data in order, work with greater discipline, and to operate better as an organization."

Pyrotek will continue to explore with the Synchrono team additional ways to gain value from SyncManufacturing software, including opportunities to further increase capacity. "With Synchrono, we can describe a problem – you only have to say it once – and they are there helping to solve the problem. The software works very well, because they really understand it and bring the value out of it.

About Synchrono

Synchrono® LLC enables the demand-driven visual factory of the future, synchronizing people, processes, machines, materials and data to drive production flow from order inception to delivery. The award winning Synchrono Demand-Driven Manufacturing Platform includes a synchronized production planning, scheduling and execution system; ekanban inventory replenishment and supply chain collaboration software; a data collection, historian and automated workflow engine; alert management and monitoring software; and a real-time visual factory information system. The Platform components may be implemented independently to provide outstanding results. And when installed collectively, these systems connect the entire manufacturing operation and extended supply chain in real-time, generating the Internet of Things intelligence for instant decision-making and providing an unprecedented foundation for communication, collaboration and continuous improvement.

Synchrono helps clients manage constraints, improve flow and drive on-time delivery to maintain a competitive edge. Look to Synchrono for software that meets your demand. Sync with us at www.synchrono.com and follow the Demand-Driven Matters blog at www.synchrono.com/blog.