

Steelite International

A world-leading manufacturer and supplier of award-winning, inspirational tabletop ranges for the international hospitality industry

Despite appearances that the potteries is another industry completely lost to overseas production, Steelite is one major manufacturer that is not only thriving, but is developing its Stoke-on-Trent based production facility to cope with increasing global demand. Recognising that to meet growth requires a more effective utilising of existing facilities, the company's latest move has been to replace its spreadsheet based production planning, and invest in the Orchestra planning and scheduling system from Access Group.

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Rob Price
Production Planning Manager

There is little doubt that UK manufacturers of ceramic tableware are facing a challenging business climate. Worldwide, the level of retail sales of china and earthenware is relatively static, and the home market has seen a sharp decline in recent years. The UK's previously favourable trade balance in china and earthenware has been decreasing steadily since 1998, and this is now being exacerbated as more of the remaining major UK players outsource production overseas.

However, one part of the international tableware market remains strong, the hospitality sector, and a UK company in a leading position in this area is Steelite International. The company is exclusively a manufacturer and supplier of tabletop products to the hospitality industry, and through an on-going programme

of product innovation, combined with high product quality, it is not only managing to continually set standards for strength and style, but has converted this into significant sales growth.

But this success has also brought major challenges. In particular it has put enormous pressure on its Stoke-on-Trent production facility to meet this demand. Yet, instead of simply looking to outsource, the company has acknowledged its production shortcomings and is now working to eliminate recognised manufacturing inefficiencies, and raise its performance.

One key area it is successfully tackling is production planning and control. Until a few years ago this was essentially just a black art. In fact, the manual system employed was so ineffective that it was generally accepted that any plans

Industry	Manufacture
Geographic	Stoke on Trent
Employees	800
Turnover	£70m
Solution	Access Orchestra

produced were non achievable; 'people just rolled their sleeves up and did the best they could.'

However, with a new management team realising that future growth could be hindered by the inability to plan products effectively through production, the company has rapidly moved forward to overcome this problem. Its first tentative step saw the in-house development of a fairly sophisticated spreadsheet based planning system that covered the main production processes, excluding finishing. But Steelite has not stopped there. Instead, the success of the initial effort quickly paved the way for a bigger investment. The company has already replaced the spreadsheet approach with the specialised Access Orchestrate planning and scheduling system, which is transforming the management of production and delivering major business gains.

Planning Revolution

Rob Price, production planning manager, explains the background to this decision. "With the introduction of the spreadsheet system we set about understanding and determining some of the actual constraints of our various processes, and transforming these in to mathematical formulas and macros that could be used to deliver better plans. And to some extent it worked well. The use of spreadsheets enabled better utilisation, some reductions in overstocking and as a result the operation did run 'smoother'. But at the same time it soon became clear that there were severe limitations as to the level of planning that could be achieved, and the improvements to be gained from using spreadsheets. They were also extremely time consuming and cumbersome to create and manipulate."

Such difficulties in using spreadsheets are not surprising as planning the 'Clay' end of the factory, which covers the processing of the clay from raw materials through to a fired 'biscuit' (the general term for a fired, but unglazed and undecorated product) is far from simple. Production has to deal 700 individual biscuit SKUs, a throughput



of 550,000 items per week, wide variations in production levels, with some products being produced at 5,000 per shift and others much slower, and significant constraints in terms of product and kiln mixes.

Price adds, "Probably the biggest benefit of the spreadsheet system was to prove to all concerned what could be achieved using better tools. There was a distinct change in attitude on the production floor, with the acceptance that planning had the potential to be a real help not just a nuisance! At the same time, management realised that while this route had been exhausted, there was clear evidence that substantial business benefits could be gained by bringing in a specialised planning system."

In selecting Access Orchestrate as the best solution to replacing the spreadsheet system, there were a number of factors that Steelite had

to consider. The company were often presented with the option of an all encompassing ERP system. However, with the existing SOP and finished stock management system serving the company well, there was no internal inclination to make such a wide sweeping change. In focusing on specialised planning and scheduling systems, the company found that it could still achieve the levels of enhanced functionality it was looking for, while Orchestrate also offered major advantages in terms of system development, ease of use and integration with the existing systems, and cost.

"With Access Orchestrate we essentially got a purpose built product, through customisation, but without paying bespoke system prices. Overall, we found the product, price and the service from Access Group was by far the best package on offer," notes Price.



Managing Complexity

In developing the new system, not only has the machine capacity and basic machining constraint data from the spreadsheet been utilised, but also far more information has been incorporated. As well as available people and skills, along with kiln capacities, Access Orchestra uses precise details on the production of each type of biscuit, including how long each takes to produce, the mould it requires, the setters needed for firing that product and the kilns it can be fired in. “The firing constraints were just too complicated for the spreadsheets, and this was one of the major drawbacks,” observes Price.

The system also handles more general process constraints, such as avoiding too many machine changeovers, optimum batch sizes, the need to balance the use of certain types of clay, and ensuring that there are not too many difficult items in production at the same time. Further, it can easily take into account many of the ‘exceptions to the basic rules’ that could not be incorporated in even complex spreadsheets.

As Price observes, “In essence, with Orchestra we have been able to capture a vast amount of the production knowledge and experience that was previously scattered about in manager’s heads, and we are now able to effectively and rapidly apply this during the front end planning process.”

Improved Functionality

With the initial implementation of Access Orchestra complete, not only is much of the core planning work for ‘biscuit’ production at Steelite now automatic, with the system simply being fed requirement data via a CSV file extract from the sales system but, crucially, planners and sections managers know that the weekly output schedules are now completely workable in terms of both manufacture and firing.

The system automatically uses the constraint data to suggest the best order to produce items, and the quantities, for the following week. Once this has been checked, and any determined changes made, the

system then produces a schedule, within seconds, to load machines and the kilns. This schedule will be optimised to a selected business objective, which could be maximised output or based around machine and kiln utilisation.

“This level of planning used to be a massive challenge, even with the spreadsheet system, and even then because many of the constraints, especially relating to firing, were not covered the output was far from ideal. Now, as well as effective schedules, the whole planning process is completed, and rapidly approved by management, in hours, rather than taking days to produce draft plans, which would then require endless meetings and amendments to get approved,” states Price.

Greater Control

Price adds, “Access Orchestra’s capabilities further mean that we can easily accommodate short notice changes, such as priority orders. The system can immediately show us how best to push new items through, how this will effect the main schedule, and again will warn if there are implications in terms of using up more resources, such as setter, than available. Previously, with the spreadsheets it was like a house of cards, make just one big change and the whole schedule could collapse and would takes days to re-produce.”

Another big step forward with the introduction of Orchestra is the ability to track, and account for, WIP. There are now three main WIP tracking points (buckets), with throughput updated regularly throughout each day. The first point is when products have been machined, the next when products have been readied for firing, and finally when fired products are booked into best biscuit stock - ready for finishing.

According to Price, “Not only do we no longer lose track of items, which in the past could easily happen, but we can now chase down anything that has been in WIP too long and either push the items through, or find out the problem that has caused a delay.”

Finally, Orchestrate is helping with data accuracy, another vital ingredient to controlling the operation. For instance, the system will not allow the booking in of items for which there is no WIP, and in just the first few weeks of operation this stopped 12 data entry errors, all of which would have had a ripple effect through the rest of production. The system also confirms exactly what has been made, by taking count of what has passed through its tracking buckets, and this data is being used to calculate wages. In the past, it was up to each operator to fill in work completion sheets.

Immediate Gains

While the long-term business benefits of the implementation of Orchestrate will be significant, by helping ensure that Steelite can effectively cope with ongoing growth in demand with existing resources, the more immediate effects are clear.

The company has visibility and a high degree of control over production, which it did not have before. As well as detailed planning, there is now constant feedback so that plans can be quickly updated to take account of actual progress, and improved data accuracy is another major gain. Finally, planning can also now be far more proactive, and with the system's 'what if' capability, the operation has the capability to investigate how best to increase production efficiencies,



while still improving delivery. As Price states, "Not only are production managers far happier, as they now have time to manage their areas, not just fire fight, but since we started to use Orchestrate we are starting to see a much greater continuity of production and a flow of products. This in turn is leading to reductions in WIP, major increases in utilisation, significant reductions in overstocks. We also are now more flexible, making it easier to meet customer demand, including short notice orders."

In fact, such has been the success of the implementation at Steelite, that the company has already decided to extend the system to also replace the manual planning of the finishing processes.

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Production Planning Manager

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About Access

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