Case Study:

Staatl. Pozellan-Manufaktur Meissen GmbH

A Factory with Industrial Service Levels
Meissen Optimises Scheduling Using DISKOVER SCO

A Factory with Industrial Service Levels

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While the big industrial mass producers currently try adapting to customers’ demands by use of industry 4.0 technologies, pushing down their lot sizes, factories like Meissen have been realising this method of production for centuries. Meissen now targets the increase of processing time and service level to achieve industrial standards. By use of the advanced planning and scheduling tool DISKOVER SCO by SCT Supply Chain Technologies, major progress has already been accomplished.

Staatliche Porzellan-Manufaktur Meissen produces hand-made luxury of highest quality. Being founded over 300 years ago in Dresden, Germany, Meissen has since progressed from Europe’s first hard-paste porcelain factory to an international luxury and lifestyle brand which is highly recognized even in China, porcelain’s motherland. The creations embody a special kind of beauty and sensuality beyond purely functional designs and thus become an expression of an individual lifestyle. An army of collectors worldwide proves the sustaining profit of embracing this lifestyle and the service that comes with it: every item which has been produced since 1710 can be reordered, even today!

Overcome economic challenges

Despite this top-rank on the market, Meissen has had a lot of issues to overcome in the last years. Business with Russia ceased due to the economic embargo, the enlargement of the product range of items under the familiar Meissen brand including items not made of bone china and finally the massive economic loss of the subsidiary in Italy amounted to a financial damage of 12 million Euros in 2015 while the turnover had the total of 39,2 million Euros. The traditional brand’s board of management thus recommended to focus on and develop the main line of business. This required an elaborate strategy which focuses on the main line of business: the manufacturing and trading of finest bone china products. One of the many courses of action at that time was to optimise scheduling and material planning. By this means, processing time should be decreased, service levels and thus sales potential and customer satisfaction increased. It was also an approach to generate cash, previously fixed in production, for investments.

Optimisation of flow of materials to reduce processing time

The starting point of the previous organisation was an order fulfilment system based on Oracle, which also included a documentation feature for piece rates. It was very suitable for regulating the workflow management of the factory. But you could not control and steer the flow of materials and the processing time and stock levels associated with it. This had the effect of causing very high processing times and thus generated an increase of service levels as well as an increase of stock items, high stock of finished products and thus high storage costs. The items made to order had to pass production alongside the stock items, too. All in all, the desired decrease of processing time to avoid major delays in delivery was not an easy task to fulfil, since most items require a total production time of several months and some specific items can even take six to twelve months until they are finished.

As customers’ demands have changed with the times, this circumstance must change as well. Online shops have shrunk the expected delivery period to 24 hours, so the customers are not used to wait for
luxury products any more. Consequently, high service levels and short delivery periods are an important means to increase sales potential.

**Scheduling over half a million SKUs**

Hence a solution had to be found which could be used to create a more efficient inventory control and material planning, including the associated stock levels. Meissen is a factory, thus there is an enormous range of about 50,000 SKUs (stock keeping units) which needs efficient scheduling. Therefore, the APS system must automatically issue manufacturing suggestions according to a predefined rule set, even across item groups and for individual items. Another difficulty is the high complexity of Meissen’s production flow. Work steps like painting and firing the item may need various times of repetition, depending on the product. Firing large lot sizes is a further challenge which largely influences the processing time of each single item and are thus a vulnerable spot. Yet the scheduling system had to be able to download and manage the unfiltered data of the production progress from the Oracle system. It simultaneously had to be able to handle several intermediate store levels to equilibrate production capacity. Finally, an interface to the sales department was needed as well to incorporate order system and demand forecasts into material planning and scheduling.

**APS system reduces processing time by 50 percent**

By implementing the APS system DISKOVER SCO, developed by SCT Supply Chain Technologies, Meissen has managed to reduce processing time by about 50 percent, decrease storage levels of finished goods correspondingly and yet increase service levels across the entire range of stock items within only one year.

APS tools offer much more precise forecasting features which focus more on the range of coverage and are thus able to improve planning and forecast the actual daily demand very precisely. DISKOVER SCO not only includes forecast features which focus on range of coverage, but also enables portfolio analysis and the integration of sales forecasts. Hence the software displays reliable and reproducible planning processes. But APS tools have yet more to offer than providing support of planning processes. They assist material planners in their daily routine, too. SCT’s APS tool, for instance, provides extensive forecasting mechanisms, which run fully automated in the background and thus continuously optimise planning and scheduling settings and decisions. This way, less technically and professionally experienced users will profit by the high forecast and scheduling precision, while the company profits by sustainably reduced stock levels and simultaneously secure service levels. All in all, the scheduler may plan a lot more effectively and efficiently.

**Implemented in only one quarter**

The process of extending DISKOVER SCO to the live-system took about one year for all items on stock, since multiple specialities had to be mapped to the process and due to the highly complex structure of the interface. Six months later, the made-to-order production was included into the roll-out as well. During this period, every item and the appropriate master data and planning parameters had been recorded, the interface had been adapted to the Oracle system and the process organisation had been optimised by creating real intermediate stores to release some pressure from the material flow chain and lower the costs for items on stock. After concluding the implementation phase, Meissen’s and SCT’s material planning experts are currently gearing the capacity planning with material planning. Yet Meissen has the high requirements for this part, too: If very sophisticated products are ordered and
one of the few painters, who are the most skilful with this technique, happens to be ill, this might eventually overstress the remaining specialists. In this case, the diminished capacity is not the only thing to consider. You will also have to consider the various complex processes of the actual orders, too. There are for instance products, which need to be fired between each step of painting, so the painter must work on that piece more than once. This exact coordination between available manpower and product related production capacity needs to be included into material planning to ensure timely delivery even if the resources are fluctuating.

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