



Continuous Use of Preactor Drives Planning Efficiency Gains for Tower Automotive



Tower Automotive is a leading integrated global manufacturer of engineered structural metal components and assemblies primarily serving automotive original equipment manufacturers. Its products are manufactured at 31 production facilities strategically located near its customers in North America, South America, Europe and Asia. In 2009 the company had revenues of \$1.6 billion and a workforce comprising 7,400 employees. The majority of its products are supplied to the Volkswagen Group (69%). Other customers include Suzuki in Hungary, Opel in Poland, Škoda Mladá Boleslav, Fiat, BMW, Mercedes, Ford, General Motors and, most recently, Peugeot and Renault.

In 2000 the company acquired the manufacturing plant in Malacky, Slovak Republic, which produces pressed and welded automotive components. Tower Automotive Malacky employs over 600 people and has a turnover of about EUR 82 million.

OPERATIVE PLANNING: MADE TODAY, SUPPLIED TOMORROW

Production at Tower Automotive Malacky is divided into two main divisions - the weld shop and press shop, where employees work on three to four shifts depending on the production load. Planning begins with loading customer orders scheduled via the EDI interface. After Materials Requirements Planning (MRP) has been run in the company's QAD Enterprise Resource Planning (ERP) system, a long-term plan and short-term daily schedule are created, including approximately three hundred semi-finished and finished products. Work orders for the coming time period are imported into the company's Preactor Advanced Planning and Scheduling (APS) system, where the plan is optimized for a seven-day horizon. If necessary, this can be fine-tuned depending on line status, tool availability, and/or planned machine downtimes. The optimized plan is then returned to QAD where operation start and completion times are overwritten in the work orders.

This process is repeated daily, resulting in the creation of two plans - a weekly plan and a daily/operational schedule. Based on these, material requirements are generated for those orders with a short continuous lead time, while the requirements for other materials are generated based on long-term orders. The intention is to plan and manufacture in a "make today, supply tomorrow" fashion.



WHY PREACTOR?

In 2001 the company invested in a new QAD ERP system supplied and implemented by Minerva, a QAD and Preactor partner with representatives in the Czech Republic and Slovakia. Following a study of planning process optimization, a positive recommendation was made to implement an APS system by Preactor International, a leader in the field of production planning and scheduling systems. Tower Automotive Malacky had previously made its plans manually and using Microsoft Excel which had many disadvantages, most significantly being highly labour intensive. Minerva implemented Preactor immediately after QAD, a decision that proved very positive, as Tower Automotive Planning and Purchasing Manager Marian Szabo explains. "In retrospect, I see the fact that production was launched along with the planning as very positive. It was a great advantage for us in terms of time saved, with the preparation of data for planning and launching of new items being evenly distributed in time."

The Preactor P200 system implemented in 2002 was the first implementation of Preactor APS in the region. Two years later, the company upgraded to Preactor P300, a more powerful version with improved functionality before upgrading once more in 2007 to Preactor 400 APS with even greater functionality. Now, at the beginning of 2011, the company is switching to the new and more convenient interface of the latest version of Preactor version 11.

PREACTOR BENEFITS: WORK HAS BECOME MORE EFFECTIVE AND STOCKS HAVE DECREASED CONSIDERABLY

Following the introduction of Preactor, Tower Automotive has significantly reduced overall planning time. Previously the planner used to spend as many as 10 hours per day with the preparation of just one plan; now the complete planning process takes only one hour a day, with the remaining time devoted to other activities associated with the production process. Tower Automotive is divided into two divisions: the weld shop and press shop, currently there are two workers appointed to planning in APS, due to their interchangeability.

Thanks to the use of Preactor and the optimization of processes related to production and planning, Work in Progress (WIP) has been reduced along with order fulfilment in the long-term and a further reduction in machinery downtime. One of the most noticeable benefits has been the reduction in stock turnover which used to be 25 days and is now only 9 days. Seven new projects have been initiated in the company over the past ten years including the expansion of the plant with several additional manufacturing facilities which have resulted in a considerable increase in production. For example, the monthly plan began at a volume of SK 200,000 and has risen to about EUR 7 million. However, in spite of this the number of employees has remained unchanged, thanks in part to the production planning efficiencies delivered by Preactor. Marian Szabo is emphatic about what Preactor has brought to the company. "Preactor has grown with the increased production at Tower and without any increase in human resources. I cannot imagine managing the entire planning process without Preactor."

The entire Tower Group has been inspired by the success of Tower Automotive Malacky's planning system, and the vision is to spread Preactor to other plants in Europe if the latest upgrade is successful. As regards the prospects for this year's production, Marian Szabo concludes, "This year we intend to expand production with a new Volkswagen project which is currently under development and its particular components are already being tested. However, with Preactor we are sure that the project increase will not entail any unforeseen situations in production planning."

