

Optessa Helps Green Manufacturing Meet Lean & Flexible Manufacturing

Scheduling Software Is Helping Automakers Shift to Greener Production Practices While Meeting Market and Competitive Challenges

Edmonton, Alberta – July 14, 2008 – While leading automotive brands are accelerating the release of more environmentally friendly vehicles, many are also striving to “go green” in their production. With the help of optimized scheduling, manufacturers can simultaneously achieve lean and flexible practices, while reducing the plants impact on the environment.

However shifting to green manufacturing is no small task considering the size and scope of the automotive assembly process. With manufacturers striving to produce greater product varieties in shorter delivery windows, it is almost inevitable to have increased line changeovers leading to increased use of resources like manufacturing capacity, storage space, power, water and so on. For example, in a solvent based paint shop an increased number of color changes leads to increase in the release of volatile organic compounds (VOCs) and energy to flush the line for every changeover. As the number of color choices offered to consumer increases, so does the potential for more daily color changeovers in the paint shop.

Advanced scheduling software from [Optessa](#) can effectively optimize and balance auto assembly planning, sequencing and scheduling across all product lines and constraints. With the Optessa MLS solution, plants can optimize the assembly line sequence to efficiently group same color cars and minimize paint changeovers. The resulting sequence not only reduces waste, but also streamlines production and cuts assembly costs.

“If manufacturers want to go green without diminishing competitiveness, they need to be both flexible and lean. The initiatives are absolutely interconnected,” said Vasu Netrakanti, chief executive officer of Optessa. “Considering all the constraints in the assembly line, greener and leaner production needs to start with an optimized schedule and build sequence that reduces unnecessary use of resources in the assembly process while meeting demanding delivery times, without sacrificing flexibility.”

Scheduling and sequencing processes in the auto industry typically consider rules and constraints imposed by the different areas within the plant and by suppliers. The integration of “green” objectives into these models can help lead to more environmentally sustainable manufacturing. In the paint shop example, this takes the form of an additional sequencing rule, which requires minimization of the number of color changes per day, thus reducing the VOC emissions due to purging the line.

One major automaker using Optessa MLS has been able to reduce paint changeovers by 25 percent. From a financial standpoint, the manufacturer has realized significant cost savings. From an environmental standpoint, fewer color changes means less VOC emissions and less water and energy usage for the changeover process.

Beyond the paint shop, optimized schedules help reduce waste in key areas of the assembly line, including:

- Overall leveling that smoothes flows and reduces inventories and other manufacturing footprints;
- Rescheduling with bias to improve material stability so there is less expediting of needed parts and a better match of parts to what is being built;
- Flexibility to support greater variety, such as those introduced with different types of interior trim or engines;
- Optimizing material handling, such as crane movements to reduce wear and tear as well as energy usage; and
- Reducing scrap.

“Optimized schedules can provide the critical link between lean, green and flexible manufacturing. There are many critical areas of the automotive industry that can be optimized to be leaner, greener and more flexible, and these can be extrapolated to any high-volume manufacturing environment,” said Netrakanti. “Manufacturers understand that they have a responsibility to minimize their impact on the environment, both with the products they produce and how they build them. This is not an insurmountable problem, but it does require a new generation of software solutions that can support the goals.”

About Optessa

Optessa Inc. is the leader in optimal scheduling software for high volume manufacturers. Optessa offers the only software solution that can effectively optimize assembly planning, sequencing and scheduling across all of a manufacturer’s product lines and constraints. It solves these complex problems through a unique combination of modern optimization techniques based on patent pending algorithms and extensive domain knowledge. Optessa’s customers include some of the largest, global brand manufacturing companies, and its platform is designed to solve the needs of companies in automotive, semiconductor and other high volume discrete manufacturing environments. To learn more about Optessa, please visit www.optessa.com.

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