

## Optimization of Production Scheduling through the Lean and Simulation Integration in Automotive Company

**Authors :** Guilherme Gorgulho, Carlos Roberto Camello Lima

**Abstract :** Due to the competitive market in which companies are currently engaged, the constant changes require companies to react quickly regarding the variability of demand and process. The changes are caused by customers, or by demand fluctuations or variations of products, or the need to serve customers within agreed delivery taking into account the continuous search for quality and competitive prices in products. These changes end up influencing directly or indirectly the activities of the Planning and Production Control (PPC), which does business in strategic, tactical and operational levels of production systems. One area of concern for organizations is in the short term (operational level), because this planning stage any error or divergence will cause waste and impact on the delivery of products on time to customers. Thus, this study aims to optimize the efficiency of production scheduling, using different sequencing strategies in an automotive company. Seeking to aim the proposed objective, we used the computer simulation in conjunction with lean manufacturing to build and validate the current model, and subsequently the creation of future scenarios.

**Keywords :** computational simulation, lean manufacturing, production scheduling, sequencing strategies

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020