소형모터 생산시스템의 생산계획수립을 위한 설비배치 기반의 시뮬레이션 모형 구축

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Developing a Layout Based Simulation Model for Production Planning of Small Motor Production System

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Abstract

Manufacturing systems like a motor production process are analyzed using simulations than numerical analyses and/or heuristic methods due to their stochastic properties. The SME(small and medium enterprise) producing automotive motors that develop CIM systems to improve production performance is focused as an application site. We analyze and understand the system exactly using layout based simulation, and then we will suggest the initial feasible production-plan dependent on the layout to overcome weak-points of the current system(i.e., high WIPs, bottle-neck processes, due-date delays, and etc.). And, solutions are suggested to increase performances of SMEs producing automotive motors in this paper.

The simulation model built in this study is modelled and analyzed with fully object-oriented methodology using **SiMPLE++**™ according to properties of production processes of the automotive motor. And, we will introduce ways to verify the model with developed templates for reusability when new needs will be occurred such as designing a new shop, extension or rearrangement of the system, change of production-plans, receiving urgent orders, and so on.

Keywords: automotive motors, simulation, layout, production-plan, reusability