An efficient assembly line balancing in automobile manufacturing

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ABSTRACT
The process time in Assembly Line balancing (ALB) is one for the most part important stage in production line at automobile manufacturing. It is a fundamental problem in continuous production line, and it is one of the difficult optimization problems. ALB contains many stations concerned with the allocation of tasks to work, where each station includes a number of operations that assist to achieve the task work. The main ALB problem is the queuing among stations during task achievement that is an obstacle to the efficient assembly line. This paper, will be process minimize the queuing problem by applying Multi-Objectives Model and Genetic Algorithm. The outcome of the mixed models helps to reduce the queuing through harmonizing the tasks in each workstation. Moreover, to get the optimal solution as well balancing the redistribution tasks to the stations.

KEYWORDS:
Production line; Automobile manufacturing; Assembly line balancing; Multi-objectives; Genetic algorithm; process time

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