World Academy of Science, Engineering and Technology
International Journal of Industrial and Manufacturing Engineering
Vol:9, No:05, 2015

A New OvS Approach in Assembly Line Balancing Problem

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Abstract : According to the previous studies, one of the most famous techniques which affect the efficiency of a production line is the assembly line balancing (ALB) technique. This paper examines the balancing effect of a whole production line of a real auto glass manufacturer in three steps. In the first step, processing time of each activity in the workstations is generated according to a practical approach. In the second step, the whole production process is simulated and the bottleneck stations have been identified, and finally in the third step, several improvement scenarios are generated to optimize the system throughput, and the best one is proposed. The main contribution of the current research is the proposed framework which combines two famous approaches including Assembly Line Balancing and Optimization via Simulation technique (OvS). The results show that the proposed framework could be applied in practical environments, easily.

Keywords : assembly line balancing problem, optimization via simulation, production planning
Conference Title : ICMOIME 2015 : International Conference on Manufacturing, Optimization, Industrial and Material Engineering
Conference Location : Berlin, Germany
Conference Dates : May 21-22, 2015