Improvement of productivity in low volume production industry layout by using witness simulation software

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IOP Conference Series: Materials Science and Engineering

2017, 257 (1), 012030

In almost all manufacturing industry, increased productivity and better efficiency of the production line are the most important goals. Most factories especially small scale factory has less awareness of manufacturing system optimization and lack of knowledge about it and uses the traditional way of management. Problems that are commonly identified in the factory are a high idle time of labour and also small production. This study is done in a Small and Medium Enterprises (SME) low volume production company. Data collection and problems affecting productivity and efficiency are identified. In this study, Witness simulation software is being used to simulate the layout and the output is focusing on the improvement of layout in terms of productivity and efficiency. In this study, the layout is rearranged by reducing the travel time from a workstation to another workstation. Then, the improved layout is modelled and the machine and labour statistic of both, original and improved layout is taken. Productivity and efficiency are calculated for both layout and then being compared.