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Productivity Improvement Through Improving the WorkStation of Manual Assembly in Production Systems

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Abstract:

The design of a production layout directly impacts the process cycle time of any manufacturing process. The purpose of this research is to design and improve the workstation of manual assembly in the production system. This research aims to improve the line balancing of a manual process, to improve the ergonomic issues, and ultimately improve the productivity of the production system. The research started observing the manual calculation before converting into line balancing percentage and at the same time measuring the current process time. Then, the data were analyzed to identify the potential issues that affected productivity. The results of this research successfully improved the workstation of the manual process and improved productivity. The obtained results found that the percentage of line balancing drastically improve from 30 to 45.2%, while the process cycle time was improved from 15.161 to 9.313 s.