

## ***ABSTRACT***

Laura Laundry is a business sector that operates in the clothes washing service sector. In the Laura Laundry production process, there is a problem, namely the waiting time (idle time) for the drying work station for 30 minutes to enter the next process. With a waiting time of 30 minutes, there was a delay in completing a customer order. This research aims to determine the balance delay, number of work stations and production output in the Laura Laundry production system flow that can run optimally. In order to solve this problem, it is necessary to balance the assembly line by minimizing the number of work stations and increasing the efficiency of the assembly line. In this research, assembly line balancing was carried out using the ranked positional weight (RPW) method. Based on calculations using the ranked position weight method, it was found that the optimal number of work stations was 2 work stations. Furthermore, the balance delay results obtained were 46.84%. The system efficiency yield was 53,2%, and the amount of output produced increased to 6 kg.

***Keywords: Production process, line balancing, ranked positional weight***