ABSTRACT

Industrial growth encourages companies in the fashion sector to increase their productivity so they can take advantage of the increasing market share. Esgotado is one of the companies that produce various kinds of fashion products in Bandung, West Java. One of the products produced by Esgotado company is bags, the Esgotado company produces five bag models, namely model A, model B, model C, model D, and Model E which are carried out on the same line. The flow of the bag production process at the Esgotado company is the cutting and polishing of raw materials in accordance with the model of the bag, then sewing, obras, and bartreks. At this time the Esgotado company cannot fulfill the production target of 30 units / day, the production target is not achieved due to bag assembly cycle times at sewing work stations that exceed takt time. The achievement of the Esgotado company's production targets is therefore necessary to balance bag assembly lines using the Mixed-Model Assembly Line Balancing Problem (MALBP) approach using the Ranked Positional Weight with Moving Target (RPW-MVM) method to balance the assembly line with the number of stations minimal work. The results of the calculation obtained a balance of the new assembly line with the number of work stations being 3 work stations, line efficiency 82.29%, balance delay 17.71%, smoothness index 383.80620, and production capacity increased to 39 units / day

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Keywords: Fashion, Takt Time, Assembly Line Balancing, Mixed-Model Assembly Line Balancing Problem, Ranked Positional Weighted with Moving Target.