World Academy of Science, Engineering and Technology
International Journal of Industrial and Manufacturing Engineering
Vol:14, No:01, 2020

Designing Electronic Kanban in Assembly Line Tailboom at XYZ Corp to Reducing Lead Time

Authors : Nadhifah A. Nugraha, Dida D. Damayanti, Widia Juliani

Abstract : Airplanes manufacturing is growing along with the increasing demand from consumers. The helicopter's tail called Tailboom is a product of the helicopter division at XYZ Corp, where the Tailboom assembly line is a pull system. Based on observations of existing conditions that occur at XYZ Corp, production is still unable to meet the demands of consumers; lead time occurs greater than the plan agreed upon by the consumers. In the assembly process, each work station experiences a lack of parts and components needed to assemble components. This happens because of the delay in getting the required part information, and there is no warning about the availability of parts needed, it makes some parts unavailable in assembly warehouse. The lack of parts and components from the previous work station causes the assembly process to stop, and the assembly line also stops at the next station. In its completion, the production time was late and not on the schedule. In resolving these problems, the controlling process is needed, which is controlling the assembly line to get all components and subassembly in the right amount and at the right time. This study applies one of Just In Time tools, namely Kanban and automation, should be added as efficiently and effectively communication line becomes electronic Kanban. The problem can be solved by reducing non-value added time, such as waiting time and idle time. The proposed results of controlling the assembly line of Tailboom result in a smooth assembly line without waiting, reduced lead time, and achieving production time according to the schedule agreed with the consumers.

Keywords : kanban, e-Kanban, lead time, pull system
Conference Title : ICIET 2020 : International Conference on Industrial Engineering and Technology
Conference Location : Bali, Indonesia
Conference Dates : January 13-14, 2020