

ABSTRACT

PT. XYZ is a manufacturing industry company that manufactures aircraft. Nose Fuselage is one part of the aircraft components that are the object of this research. In the process of assembly often experience problems where there is a waiting time (waste waiting) for 33 hours, resulting in the achievement of the production process. In this case, improvements are needed to use an approach to lean manufacturing. The method used in the approach to lean manufacturing is by mapping Value Stream Mapping (VSM) and Process Activity Mapping (PAM), it can be seen that the total lead time in the assembly process of nose fuselage components is 1061.47 hours. Then in identifying waste waiting such as waiting for the RH component to be processed, waiting for the sealant process to be finished, and delaying the results of the sealant to be tested can use a fishbone diagram and 5 Why's. The draft proposals such as making sealant aids, providing sealant storage areas and balancing the trajectory using line balancing. With line balancing using RPW, a line efficiency of 51% is obtained with a balance delay of 24% and a smoothness index of 241.02 and a lead time of 1016.85 hours with a reduction in the percentage of minimization of 44.62% which is done by balancing the workstation trajectory on the nose LH bottom with RH and nose cap structure workstation with nose panel because it has close workstation distance.

Keywords: Lean Manufacturing, Waste Waiting, Line Balancing, Value Stream Mappng, Process Activity Mapping.