

ABSTRACT

PT.Dirgantara Indonesia is an aircraft manufacturer company which one of its product is aircraft type CN235-110. One of aircraft type CN235-110 part is Nose Fuselage which has an assembling process using assembly lines with a panelization system in order to do different works in one time, So that system needs more efficient assembling system. But in case the existing system in Nose Fuselage assembling system still has a big differences in a process time and idle time.

Tabu Search is one of the meta-heuristic method which can use to find an optimal solution for Nose Fuselage aircraft type CN235-110 assembly line. Based on the methodology of Tabu Search which has some of steps these are initializing the parameters, determining the initial solution, doing the solution test, grouping the solution, finding aspiration creations, determining aspiration and the last is determining the best solution.

An assembly line with a Tabu Search method resulting the minimizing the number of workstations, and minimizing the Balance delay from 52,48% to 23,92%. Besides that there was an increasing value for Line Efficiency from 47,52% to 76,07% and the smoothness index has decreasing from 105,3586 to 23,2164 .

Key Words: Assembly Line Design, Line Balancing, Tabu Search