

ABSTRACT

PT. Dirgantara Indonesia (Indonesian Aerospace) is the first aircraft industry and the only one in Indonesia and even in Southeast Asia region. These are customized production company that has a variety of products and line job order production, Aerostructure Directorate is one of the units that form the backbone of business in this industry that manufactures aircraft parts and components. Part number and types of components produced in Medium Prismatic Machine (MPM) for programs to be studied range from 261 to 33 variations of part number in the same process.

In the Medium Prismatic Machine (MPM) occur inefficiency layout shown in the presence of backtracking, irregular material flow and material movement between operations. Type of layout is performed in this study is the approach to Group Technology (GT) and the CRAFT algorithm. GT performed the 3 methods in the Rank Order Clustering, Similarity Coefficient algorithm and Row and Column Masking for grouping parts and machines.

Based on research conducted, there is a 4 cell manufacturing the cell A (8 machine, 17 variations of the process, part number 135), cell B (5 machine, 4 variations, part number 17), cell C (4 machine, seven variations of the process, 97 part number), and cell D (1 machine, 5 variations of the process, part number 12). With this grouping is obtained a reduction total moment movement by 25% from 35776.5 to 26 846. From the results of the proposed layout has also obtained a reduction in total distance of 59.5 m, of the total distance of 614.5 m existing layout to be 555 m.

Keywords: *Layout, Group Technology, CRAFT, Total Moment Movement*