

ABSTRACT

PT. Agronesia Division Inkaba is region company that manufacture products made of rubber material. PT. Agronesia Division Inkaba perform the process production based on orders (make to order). Fender Cell SUC 1250 and Pad Shoe are products that have demand reach 70% of total production. Large demand for both products requires them have optimize movement moment, however there are backtracking and displacement of material far between operation in production line. In addition, the company also planned to provide additional facility for the purpose could solve order with fast time.

The algorithm is used in this research is SA- CRAFT algorithm that use requires data of material movement (multiplication of the distance with the frequency of movement). Simulated Annealing algorithm is universal algorithm use for solve the problem of combinatorial optimization in layout problem.

Based on research has been done, the proposed layout can reduce total material movement moment until 58,6% from existing condition. In addition, there are company plans to add facility being two in kneader machine 1, two in open mill machine 1 and two in extruder machine. Thus the proposed layout can efficiently material movement moment.

Keywords : layout, SA-CRAFT algorithm, movement moment.