

ABSTRACT

PROPOSED IMPROVEMENT LAYOUTS USING FRACTAL METHODS

(Case Study in Afo/Chandra Furnitures)

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Production is the main thing in a manufacturing industry. Production activity would work well if the flow pattern of the material in the production floor smoothly. Better transfer of material will speed up the completion of a product. Intense competition in the manufacturing industry forced the industry to make the material flow to be short. This can be done by resetting the engine layout in such a way. Industry Afo/Chandra Furniture as one of the furniture industry in the city of Palembang that manufacture products based on the make to order. The product has so many variations of high material flow and higher material handling costs. The distance between the machine far enough too play a role in the cost of material handling.

The layout of the fractal method can produce a short distance between the machine and more flexible to address the varying conditions of the product . This method will form fractals that have the same ability to make the production process , in which fractal is formed of two pieces , each of which consists of 9 pieces of machinery . In the proposed layout is formed , the machines were experiencing engine displacement is 1A , 1B , 1C , 2B , 3B , 4 , 5 , 6A , 6B , 7 ,8A, 8B, 10A, and 10B. This method was successful in reducing the material displacement distance during research periode of 58,125 meter or 6.251% and the cost of material movement during research periode Rp 27.971,9375 and during one year Rp 559.438,75 or 3,066 %.

Keywords : *Layout, Fractal Methods, Movement of Distance, Material Handling Cost*