

## ABSTRACTION

PT X is one of manufacture company in paint-production in Indonesia. Production section in this company is divided into four sub-sections: water based production, solvent based production, pigment paste production and chemical construction. Pigment paste production sub-section produce three kinds of products: water based pigment paste, solvent based pigment paste and solution. The management division of pigment paste production section determined to increase the production of water based pigment paste product. To do so, production section should reduce the time of the material being in the system, because after further observation on March 2007, it is proved that the process time is only 57% of the time of the material being in the system. According to field observation, the long time taken for the material activity in the system is caused by inefficient positioning and work method. Thus in the research there is a recondition that redesign more effective facilities positioning by using CRAFT algorithm and recondition in work method by using work chart analysis. Beside, to know the performance from the recondition that was made, being made a representative model to simulated.

The recondition begin with redesign factory facilities by using CRAFT algorithm. CRAFT algorithm is double criteria algorithm which is need quantitative data, that is From To Chart and qualitative data, that is ARC. Beside, CRAFT algorithm data input is begin initial layout. Beside facilities recondition, there is also work recondition method by using work chart analysis that is flow process chart. Then being made a model to represent the recondition that is done and make a comparison with the model before the recondition that represent existing condition so it's possible to know the performance from the recondition.

Based on the research, it was known that positioning recondition which result layout idea was reduce movement momentum 31.02 %. And then, Recondition of work method reduce time of operation 1000 second, transportation activity 209 second and waiting activity 3437 second. From the simulation got there is decrease in time operation 9,86%, movement time decrease 27,72%, decrease of bottleneck material 27,37 % , and decrease of the time the material being in the system 17,25 %. Result from the simulation also can reveal the increasing of product quantity that was being produce 5,6%.

The research was reveal reconditions in facilities positioning and work method that's useful for the company. Simulation model that was made is compatible and relevant to be basis performance from the existing condition and idea condition.

Keyword : recondition, layout, work method, craft algoritm, flow process chart