ABSTRACT

STP RUBBER is a factory which is focused on motor spare part manufacturing made of rubber, such as pillion step for motor, pen, lamp chop. While more factories operate on spare part production, in 2004 STP RUBBER began to produce book shelf, cupboard, and computer table. So that need of space for production floor becomes narrower, 726 m^2 for spare part production and 443 m^2 for shelf production. Besides, process flow becomes unmanaged because some machines which have related activity are separated to each other. It affects on longer production process because transportation time becomes longer. Thus, it needs to do facility layout recommendation using craft algorithm. Besides, to get optimal facility layout movement momentum and optimal production time it needs visualization using computer aided simulation.

From research result, it is obtained a recommendation layout with 9% of movement momentum. Area which are moved are hand press print 2 toward punch machine, punch machine toward lathe area 2, and former assembly toward lathe area 1. Comparison of process time of existing layout with recommendation layout results in decreasing production process time from 4162.17 seconds to 4062.70 seconds for filter vega production and from 37234.30 seconds to 37224.14 seconds for shelf production. This table below contains comparison of existing layout to recommendation layout

Distance and movement of exsisting layout and recommendation layout

From	To	Exsisting layout		Recommendation layout	
		Distance	Time	Distance	Time
mill	hand press 2	10040	50.23	4150	20.76
hand press 2	finishing	7150	54.23	1750	13.27
hollow	hole	5350	49.23	3950	36.35
hole	assembly	550	5.53	1250	12.57
assembly	weld	950	13.67	650	9.35

Keyword : *Redesign, Layout, Craft Algorithm, Simulation*