

## **ABSTRACT**

PT Dynamic diffuser is one manufacturing company engaged in fulfillment of the needs of central air-conditioning accessories. PT Dynamic diffuser requires good design layout facilities. Existing conditions indicate that there are inefficiencies in the production process of water supply diffuser. Inefficiency can be seen from the time delay during the production process, resulting in material handling costs are quite large, while the parameters are used as a benchmark for an efficient facility layout is a material handling costs (OMH), the minimum.

To minimize material handling costs (OMH), the facility layout design is performed at the factory of PT Dynamic diffuser. In this research, manufacturing facility layout using the layout process (process layout). The layout is produced the initial layout, from to-chart, and move cost-chart which becomes input for CRAFT algorithm to obtain the best layout design. CRAFT algorithm in this research contained in WinQSB software version 2, while the process flow simulation using software promodel student. The best results from OMH alternative layout was selected as the best manufacturing facilities by comparing the material handling costs (OMH).

Through this research, obtained the design layout of the best facilities in the production of PT Dynamic diffuser is an alternative layout design to six, where the drip machine 1,2,3,4, 1,2,3,4 cutting machines, measuring tables, machine PON , bending machine, drilling machine, placed adjacent to the worktable assembly. Thus, the lowest obtained by OMH for Rp.3.137.266, - with material handling equipment is human.

Keywords: layout, CRAFT algorithm, material handling costs (OMH), initial layout, from to-chart, move cost-chart