ABSTRACT

PT. Gerlink Utama Mandiri is a company whose main focus is on the manufacture of medical device products. In the last few months PT Gerlink Utama Mandiri started producing new products which resulted in the company having to add a new production building because the previous production area could not accommodate additional facilities and raised the main problem, namely the total distance for moving endoscope product material which was increasing because the machines were not in accordance with facility proximity. This final project focuses on the stages of the mechanical process in making endoscopes. The purpose of this analysis is to produce an effective and efficient proposed new facility *layout* design in order to minimize the total movement of material so as to obtain an optimal facility *layout*. In this study, the method used to design the facility *layout* is the BLOCPLAN Algorithm. In the process of designing the proposals made, further analysis of the designs proposed by the BLOCPLAN Algorithm requires adjustments to the actual conditions of the field. Added several adjustments from the results of the BLOCPLAN Algorithm design so as to minimize the total material movement distance with a smaller travel distance on Endoscope products. From this design the proposed Algorithm can reduce the distance for moving Endoscope products and can obtain an effectiveness and efficiency level of 595 meters and 40%. because the majority of the machines have been brought closer according to the level of closeness of the facility and keep away unused machines that can hinder the movement of operators while working.

Keywords: Facility *Layout, Material* Movement, *New Products*, BLOCPLAN