

ABSTRACT

As it was acknowledged by the United Nations as one of “Masterpieces of the Oral and Intangible Heritage of Humanity” on October 2, 2009, the number of the production as it has been recorded by the Ministry of Industry of Republic Indonesia on the performance of batik industry development in Indonesia also shows an increasing trend for the past five to seven years. Seeing the fact that the demand for the product has been increased quite rapidly, it is needed to perform a modern technology advancement in its production process, which the traditional method is still applied. After developing the automated stamped-batik production machine, it is now needed to do a further step in obtaining the provision for the modern production machine. Therefore, a plant layout design planning research is done in order to prepare the business, that is the automated stamped-batik machine factory establishment, with the layout type which combined the process and fixed layout type. Considering the product is new to the market and currently has no competitors, the plant layout planning is designed to fulfill the order by the batik cloth producers to be used on their batik cloth production factory. Moreover, to have a more convincing business for the automated stamped-batik machine factory, an economic analysis is also done which includes the depreciation on the assets. The result shows that the automated stamped-batik machine production is feasible to perform by having NPV of Rp 772,270,302 ; IRR of 14.18% and PBP of 4.6 years, with considering its production process layout planning which includes the standard plant layout planning for its factory.

Keyword: plant layout design planning, batik industry, economics analysi