

ABSTRACT

Rumah Batik Komar is a company engaged in the production of batik. Cloth dyeing process in the Rumah Batik Komar divided into two method, namely the process of dyeing and gradation. Dyeing process is carried out with the help of the operator at the coloring workstation. Using existing mechanisms of batik coloring “shaking” technique. Work mechanism of existing condition makes operator working in awkward postures due stooped posture when performing the dyeing process so that adversely affects operator. This causes the operator to feel fatigue and if left continuously can cause injury to the operator. One effort to do that is by doing a redesign back on the table dyeing in coloring workstation. A new design table dyeing which has been designed in previous studies aiming to minimize awkward postures during the dyeing operation table has not been through testing the feasibility of the design. Hence performed simulations using Motion Study Analysis, Finite Element Analysis, and Rapid Upper Limb Assessment for known technical feasibility of the design. After that is made prototype and Usability Testing so known working mechanisms significantly. With reference to the results of some of these tests are technically the product design improvement declared eligible.

Keywords— motion study analysis, finite element analysis, rapid upper limb assessment, usability testing, working table