Abstract

This independent study aims to apply the technique of value engineering in order to analyze the value of final process manufacturing of the flexible printed circuit board. The assembly line of product NKA-1 is the study of interest because such line used many machines and equipments such as jig and fixture as well as a lot of manpower. The target of this work is to reduce the labor cost through the elimination of non necessary operations and non value added activities as much as possible.

The study follows the seven stages of value engineering technique. Firstly, the project selection is resumed and the concerned data are collected in the second stage. After that, the functional analysis of each working procedure is applied in order to classify the primary and the secondary functions. Consequently, the improved methods are induced in the creativity stage, then, evaluated in the next stage. The improved methods are implemented and, followed up in the final stage. Furthermore, the ESCR Technique is employed to eliminate the production wastes from non necessary operations. Besides, the adaptation between batch and continuous production enhances the effectiveness of this improvement.

After the improvement, it was found that the labor cost, determined from the working time using time study technique, was reduced from 8.1028 to 4.2515 baht/sheet or 47.53%reduction. In case of production resource compared to the production order, the numbers of machine and manpower used in such production were reduced for 40% and 60%, respectively.