Improvement of layout production facilities for a secondary packaging area of a pharmaceutical company in Indonesia using the corelap method

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Abstrak

This research is for one of the pharmaceutical companies in Indonesia. The company's production area is composed of two parts, namely a Black Area and a Grey Area for processing and packaging. There are four types of packaging in the Secondary Packaging Area. Each type of packaging uses different processes, but there are also some processes that are used by all types of packaging. Based on these observations, the layout of the production area for secondary packaging in the pharmaceutical company is not optimal because the material handling distances are still quite long and there are some similar processes for same packaging type that are not adjacent, so that the production process is inefficient. This study aims to redesign the layout in the area with the Computerized Relationship Layout Planning (CORELAP) method. Data such as the name of the process, the order of the process, and the relationship between processes into the Activity Relationship Chart (ARC), are subsequently processed to obtain the Total Closeness Rating (TCR) values for each process iterated with the CORELAP method. From the calculations, the proposed layout has material handling distances that are shortened by 9.017% compared with the current layout. The same type of packaging processes are located in adjacent positions.