ABSTRACT

PT Mescomitra Aditama (Steel Door and Fire door division) is a company that produces building construction materials made from steinless steel, which is Steel Door and Fire Door. The company uses a make-to-order system for customer orders. Problems that occur in PT Mescomitra Aditama is the high amount of raw material inventory when compared with the needs of raw materials for production. The occurrence of overstocks led to a large total inventory cost.

This research will be proposing inventory control to minimize total inventory cost using MRP with lot sizing technique EOQ, LFL, LUC, POQ, Silver Meal and AWW. By calculating the safety stock and calculating the MRP will be obtained the amount of time frequency of ordering, optimal lot, the holding cost and the order cost, and the total inventory cost. The proposed inventory control using MRP with Silver Meal lot sizing technique resulted in the least total inventory cost compared to actual condition and calculation with other MRP, thus minimizing total inventory cost by 50%.

Keywords : *make-to-order, inventory, raw material, overstock, safety stock,* MRP, *EOQ, LFL, LUC, POQ, Silver Meal, AWW*