ABSTRACT

PT. Sandy Globalindo (SND) is one of the automotive spare parts and automotive accessories manufacturers in Indonesia, especially for motorcycle. The first product of PT. Sandy Globalindo (SND) is a foot step for motorcycle and superior product is Exhaust for motorcycle. One of the products produced at PT. Sandy Globalindo (SND) is Exhaust Kawasaki KLX 150. Exhaust Kawasaki KLX 150 has a problem production. There is a production not match on terget so this problem need improvement a production planning and raw material inventory planning Head Silencer KLX 150 has a lead time of 1 week. In order that production to fit on target, there is need have a good production planning of Exhaust Kawasaki KLX 150 and a good inventory planning of Head Silencer KLX 150.

The production planning using linear programming with requires demand data, capacity data and working days in one year. The function linear programming in this research is for knowing optimal quantity of production with to cost effect, production capacity effect and demand effect. The resulting of this calculation is the optimal quantity of production per month. This calculation is assisted by WinQSB softwere, this softwere is used to solve Integer Linear Programming problem with Big M method. The output of this calculation is the optimal quantity of Exhaust Kawasaki KLX 150 production.

The planning inventory using EOQ (Eqonomic Order Quantity) method with Quantity Discount where the company got the choice from supplier side to buy component Head Silencer KLX 150 with interval prices in accordance with the quantity ordered. The calculation of EOQ is calculate the number of components to be ordered with price comparison in accordance with interval prices which are already set by the supplier. This EOQ calculation to represents the optimum component ordering to suppliers. The calculation of EOQ takes into account the Total Cost of the interval prices which is offered by the supplier. After the Total Cost has been calculate, choose the smallest Total Cost and also calculate the order frequency, order interval time and re-order point.

The calculation of production planning using linear programming, the result of the calculation using WinQSB in January to December is 0, 75, 125, 225, 225, 125, 225, 525, 325, 125, 225 and 125. In January production is 0 that means in January no production. The result of calculation inventory planning using EOQ method with Quantity Discount is 108 units per order of Head Silencer KLX 150 component with total cost Rp. 152.749.263 and ordering frequency 23 times ordering with order interval time is 0,04 year, re-order point when component Head Silencer KLX 150 remaining 65 units with lead time ordering of raw material / component during 7 days/ 1 week.

Key Word : PT. Sandy Globalindo (SND), Linear Programming, Production Planning, Inventory Planning, EOQ, Quantity Discount.