ANALYSIS PRODUCTION CAPACITY INCREASE IN CRITERIA TO MINIMIZE THE INVESTMENT AND OPERATIONAL COST IN PT. TRI RATNA DIESEL

Student Name : Ong Sutrisno
Student Number : 9106201304
Advisor : Prof. Dr. Ir. Moses L. Singgih, Msc.

ABSTRACT

PT. Tri Ratna Diesel (PT. TRD) is a manufacture company that involve on disel engine making sector and in 2010 will increase the production target of disel machine series D 700 and D 2700 of each 500 unit per month. PT. TRD has CNC Machining (CNC) division that in duty to process the component of diesel engine. From the analysis result of intern company obtained that the making of crank case in CNC division need the longest time from the other component making process. The research is focused on CNC division and product that will be analyzed is the crank case making of diesel engine series D 700 and D 2700.

The problem faces by the company is unavailability of facility to meet the target planned. The improvement sugestion is based on the process need level that done by machine. The suggestion of used machine king is double spindle milling machine, radial drill machine, and vertical milling machine. Total of expenditure value for 10 years in interst of 6.5% with the machine alternative composition chosen if it is seen from the present value is Rp 10,366,353,000.-

The arrangement of machine based on product layout because the production process series of suggestion orderly is begun from double spindle milling machine, radial drill machine, then vertical milling machine. The material flow pattern is S-shaped because it is influenced by the shape and use maximally of the existing room. The wide of area needed is (12 x 20) m2 and there are three areas of (2 x 2) m2 in wide as the buffer storage. The distance to take by material from the begining of material come into the production process series until finished production is 42.5 meter in length.

Key Words : production machine site system, economy of enggineering.