

ABSTRACT

PT XYZ is a company that started as a workshop that serves the work of machining components and fabricating equipment for industry as well as being a supplier of various components of motor vehicles and machinery. Currently, PT XYZ has produced roller conveyor as one of its products. Unfortunately, PT XYZ's production capacity for roller conveyors is very difficult to meet monthly production demands. In addition, with only two employees who are responsible for the production process and the absence of a standard time, the production process experiences problems related to time. In this final project, manpower planning design is carried out to get the right number of worker so that production can fulfilled the demand production of PT XYZ.

In order to maximize the production of roller conveyors, it is necessary to evaluate one of the most important aspects that can affect the whole problem. Evaluation is carried out on the number of human resources where manpower planning design is carried out to determine the number of workers needed to meet production demand. It can also solve other problems, such as calculating the standard time and planning the number of machines needed as a basis for manpower planning followed by the number of machines. In the evaluation process, primary data and secondary data are needed, followed by measurement of stopwatch time study data to then be brought into the design. In the design, the data uniformity test was carried out on the measurement results, followed by a data adequacy test so that the cycle time was obtained. Then the performance rating is determined by the westing house method, followed by the calculation of the normal time and the allowance which is the input for the calculation of the standard time. After getting the standard time, the number of employees can be calculated by multiplying the standard time by the demand for one month which is then divided by the working time for one month.

The manpower planning design resulted in the proposed number of operators for each work station, namely, the addition of four operators at the M1 work station,

four operators at the M2 work station, one operator at the QC work station, and one operator at the Packaging work station.

Keywords: Design, Manpower Planning, Stopwatch Time Study, Standard Time