ABSTRACT

THE APPLICATION OF PRODUCTION AND PROFIT OPTIMALIZATION IN TOWEL GARMENT COMPANIES

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Surya Gunung Mukti is a textile company in garment producing towels. The problem faced by these companies is the difficulty to optimize the existing raw material for production of yarn towels that can be generated in one day so that the maximum corporate profits bigger. Therefore, companies require a certain calculation basis in order to optimize use of limited raw material yarn.

Production and application optimization benefits to the company Towel Garment was built to overcome these problems. This application has the capability to process raw data string, the working time data, the data needs of the production of towels and expense data for optimization calculation. The calculation was conducted on the basis of calculation and optimization using the simplex method, branch and bound method. Simplex method is a mathematical procedure repeated to find the optimal solution of many problems of Linear Programming applied in allocating scarce resources to maximize profits and minimize costs. While Branch and Bound is a method used to round off the value of decision variables is obtained from the calculation simplex method.

The output of this application are plenty of towels are manufactured based on the existing resources of yarn, the total cost burden of expenditure incurred during the production process as well as gross and net profits from sales of towels. This application can increase the percentage of corporate profits and big profits depend on selling price comparisons between the towel with each other.

Keywords: Optimatization, Simplex Method, Branch and Bound Method, Linier Programming, persentase.