

**EVALUATION OF PRODUCTION DOWNTIME AND
DEFECTS IN TEA BAG PRODUCTION**

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ABSTRACT

Modern Industries uses high level of automation with complex machines. The function of automation is to achieve higher production rate with better quality. Tea bags are one of the most popular brewing methods in tea industry. They are made in a semi-automated process carried by the production company. The process flow of tea bag manufacturing comprises of various sub process making it a complex process. Cost of production and quality of the product are the ultimate challenges for the producer. This research was intended to find out the main defects in the process flow of tea bag production (specially for exporting purposes), and identify production downtime to make recommendations and suggestions to overcome the weaknesses.

The research was conducted through the observation of production process of Maisa and Constanta machines. The company production line had very frequent failures resulting significant reduction in the production efficiency. Pareto analysis was conducted to identify the reasons that give the highest downtime. Hence, production downtime was categorized as the production breakdown and maintenance breakdown. Maintenance breakdown specially related to the machines which are used to produce tea bags and it can be categorized as planned maintenance and engineer breakdown maintenance. The machines must remain in operating condition in order to achieve the desired result or goal. Production breakdown specially related with human errors and working schedule. The both machine have reported a very frequent of production breakdown when compared with engineer breakdown. The Maisa machine contributes 71% production breakdown per day, and 25% of engineer breakdown. Ultimately production efficiency becomes 54%. The Constanta machine reported 59% production breakdown and 37% engineer maintenance breakdown. The machine production efficiency was 53%. Highest downtime contribution factor was tea break for both Maisa and Constanta machines. The major causes that affect the production were lack of training, lack of supervision, unawareness among workers, no proper machine maintenance schedule and lack of machine spare parts.

Keywords: production downtime, defective tea bags, waste, Maisa and Constanta machine