EFFICIENCY ANALYSIS OF SOYBEAN SHED PEELING MACHINE

Ir Mochamad Irwan Nari, S.T., M.T. *(Thesis Advisor)*

Hasan Al magroby

Mechatronics Engineering Technology Study Program
Engineering Department

ABSTRACT

This study analyzes the efficiency of a soybean hull peeling machine, addressing the manual hulling efficiency that hinders tempeh productivity. The objective is to evaluate the efficiency, duration, percentage of perfect hulling, and capacity of the machine at various loads. Using a descriptive approach, a series of structured tests were conducted with a 5 kg soybean sample. The machine capacity (kg/hour) and hulling efficiency (variations of 1, 3, and 5 kg) were measured and analyzed. The results show an average capacity of 128.796 kg/hour, with optimal efficiency at a load of 3 kg (94.04%), and remaining high at 1 kg (83.46%) and 5 kg (93.83%). In conclusion, this machine is very effective in hulling soybeans, increasing the efficiency and productivity of tempeh processing, and saving time and energy.

Keywords: *Peeling Machine, Husk, Soybean, Efficiency, Capacity, Tempeh.*