Planning And Performance Analysis Of 3kg Capacity Shallot Peeling Machine. Dr. Nurul Zainal Fanani, S.ST., M.T. (Dosen Pembimbing)

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ABSTRACT

Shallots, or Allium ascolanium L., were a type of root crop often used as a spice and traditional medicine. In the food industry, shallots acted as an aroma and flavor enhancer in dishes. The shallot processing process had several stages, one of which was peeling. Manual peeling took quite a long time and could cause stinging effects on the eyes. The Onion Peeling Machine with a capacity of 3 kg was a machine used to speed up the process of peeling shallots. This machine was driven by a YZ Single Phase motor with a pulley drive and was transmitted using a v-belt to drive the shaft. Testing the 3 kg capacity peeling machine included the weight of shallots at 1 kg, 2 kg, and 3 kg. The test results showed that shallots weighing 1 kg took longer, about 6 minutes. Meanwhile, tests using 2 kg and 3 kg shallots were the fastest tests and took 4 minutes in the peeling process. The mass or composition of shallots affected the speed of the stripping process. If the amount of shallots was small, the stripping process took longer. This was due to the space between the shallots and the rubber peeler, which resulted in less than optimal friction. Peeling using a peeling machine was capable of peeling 60 kg per hour. This showed an increase in performance of 20 times more effective than the results of manual peeling.

Keywords: Shallots, Onion peeler, Electric motor, Pulley, V-belt