DESIGN AND ANALYSIS OF COPRA DRYER MOTOR CONTROL SYSTEM

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Abstract

One of the factors behind the manufacture of this copra dryer is to improve the quality and quality of coconut plantations in Bengkalis Regency which must be balanced with the high productivity rate of coconut plantations in Bengkalis Regency. One of the obstacles in terms of increasing production is due to the drying process, because it still relies on sunlight. So that the dependence on climatic conditions during drying is a problem in itself. This results in not being able to optimize production capacity, because the drying process depends on the intensity of sunlight, which requires a very large space. So from that a dryer was created to solve this problem. In drying using the first method (alternating active heater), after drying the copra for a long drying time of 11 hours, the copra weight decreased by 550 grams (55%). Within 1 hour copra decreased weight by an average of 50 grams (5%) and within 20 minutes copra experienced an average weight loss of 16.17 grams (1.61%). In the third drying (heater is active simultaneously), after drying the copra with a long drying time of 6 hours, the weight of copra has decreased by 1360 grams (27.2%). Within 1 hour copra experienced an average weight loss of 226.6 grams (4.53%) and within 20 minutes copra experienced an average weight loss of 75.55 grams (1.51%).

Keywords *: Finned Heater, Motor Power Window, Arduino, Torque, Copra.*