

MANUFACTURE OF SOYBEAN PEELER AS AN ALTERNATIVE TOOL FOR TEMPE MANUFACTURING BUSINESS

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ABSTRACT

One of the causes that hinder the productivity of soybean husk peeling is because the peeling process is still done manually, using human power. To overcome this, this tool is made to peel the skin of soybeans with the process of separating the skin of soybeans mechanically. In this final project, the problem to be solved is to make a more effective device, the transmission system of the device. The problem of this transmission system will be solved by the power used is a motor with a power of 1HP. To make the soybean husk peeler, the transmission system was analyzed and calculated in such a way that the diameter of the pulley was 305mm and the drive pulley was 101mm with a shaft distance of 3mm from the wall. The pulley system uses a v-belt of type B65. The resulting belt speed is 7.44m/s. The blade shaft diameter is 89mm and the motor shaft diameter is 25.4mm. For the bearings used pillow block type with a life time of 7,534,611 working hours. With the above parameters, the desired speed is 466 rpm with a capacity of 80kg/hour at the rotation of the soybean husk separator blade.

Keywords: Soybeans, Transmission System, Parameters.