

ABSTRACT

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Transmission in Milk Pasteurization Machine is an important part. The purpose of transmission design of this milk pasteurization machine is to know its components and types of materials, to decide its ratio transmission, and to understand the steps in making Milk Pasteurization Machine.

The applied method in the design of Milk Pasteurization Machine is started with concept building then picture presentation and material identification that necessary for transmission making for this machine.

The result of transmission calculation for Milk Pasteurization Machine together with its testing result confirmed that all components are working well. This machine operates by specifications of 8 liter capacity of milk, full stainless steel material, thermocouple sensor for its temperature control, high temperature heater stove, with double jacket canisters. In overall, the making of milk pasteurization machine can work as it expected with the support of engine rotation transmission that has power of 1400 rpm, integrated pulley with pulley A diameter of 350 rpm, and pulley B diameter of 140 rpm. Where the length of v – belt A is 792.6 mm with the speed of 3.6 m/s, and v-belt B 949,6 mm with the speed of 1.8 m/s. The Axis diameter is 17.37 mm, torsion of 568.2 N/m, and slide tension is 0.054 kg/mm².

Keywords : The Transmission Design of Milk Pasteurization Machine, Pulley, V-Belt, Electric Engine