ABSTRACT

The rattan bending process is very influence the desired quality and form at the product of rattan furniture. The stiff condition of rattan will result at the difficulties of bending process and the result will not became as expected.

Redesigning of Rattan Softener Appliance tried to solve the above problems by softening rattan with the saturated vapour having temperature at 100 °C and pressure at 1 atmosphere in the steamer tubes, those saturated vapour yielded by boiler. In this steamer tube the vapour will be condensed and the latent heat released by vapour will be absorbed by rattan, than increase the temperature of rattan.

To soften the rattan require 30 minute when rattan temperature has come near the vapour temperature. Energy which is needed for each process equal to 1321.869587 kJ for every steamer tube. With 8 hours of work hour in a day will be needed 200 kg of vapour. When the steamer tube does not work the vapour will be used as energy at rattan dryer, by using the heat exchanger to convert the heat from vapour into the dryer.

Keyword: appliance of rattan softener, rattan, saturated vapour, steamer, boiler, heat exchanger.