

Utilization of Sengon Wood Waste Fuel, Rice Husk and Wood Sawdust For the Efficiency of UB Biomass Furnace 03-01. Yuli Hananto, S.Tp M.Si. as chief counselor

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ABSTRACT

Biomass furnace UB 03 - 01 is an energy efficient furnace produced by Indonesia, because it uses a gasification mechanism of preheating and the direction of the air against the direction of the fire so that combustion becomes complete. Various kinds of biomass fuels that are around us can be used as a fuel for biomass furnace UB 03 - 01 are sengon wood waste, rice husks and wood sawdust. This study aims to determine the characteristics of the fuel that is in accordance with the biomass furnace UB 03 - 01 and to determine the efficiency of the biomass furnace UB 03 - 01. The parameters that used are moisture content, density, bulk density, combustion rate, calorific value and heat conduction of fuel, where the fuel in accordance with biomass furnac UB 03 - 01 is sengon wood waste by testing these various parameters. The furnace is tested using the Water Boiling Test (WBT) method to determine its efficiency. The results of WBT testing showed that the efficiency of biomass furnace UB 03 - 01 using sengon wood waste as fuel is 5,8%, using rice husk as fuel is 2,02% and using wood sawdust is 1,2%

Keywords : Biomass Furnace UB 03 - 01, Combustion, Biomass Fuel, Stove Efficiency