

ABSTRACT

Dust collector is a tool designed as a complement to the vibro mesh type sorting machine found at PT. Perkebunan Nusantara VIII Ciater Lembang to deal with dust particle problems. The dust collector tool functions to suck the dust particles produced by the sorting machine. Dust collector has several components that must be assembled before the tool can function as a whole. The proposed design of tools involving components using stainless steel material as the basic material is still a doubt to be realized because the material resistance test has not been conducted. Stainless steel material will experience deformation when exposed to heat continuously. Components made from stainless steel will reduce the effectiveness of the tool in deformation conditions so it is necessary to test the strength of the stainless steel component. For this reason, it is necessary to conduct a material resistance testing simulation which will only be aimed at the hood part using the Finite Element Method (FEM).

Keywords— [Dust Collector, Hood, Finite Element Method, Stainless Steel, Material.]