

ABSTRACT

CV. XYZ is a company engaged in the processing of animal feed raw materials into animal feed that is ready to use and has been packaged. The main raw material used in this company is coffee skin. The raw materials are chopped using a Hammermill machine so that they become smaller than before and packed in a sack with a capacity of 50 kg and then ready for sale. The Hammer Mill machine is a machine designed and made to grind or chop material particles into smaller particles. The result of grinded process on the Hammer Mill machine come out through the packaging part. At the stage of the process of real conditions in this company, a problem arises, namely loss of good or not being properly accommodated by the processed products. With the Reverse Engineering method, this research examines the company's existing design and makes a better design proposal. The 3D modeling and simulation process uses the Autodesk Inventor 2019 and EDEM 2020 software. From the optimization results, the proposed design and simulation results parameters in the form of the number of particles and the resulting mass are 0.41 kg/s and 230.9 particles/s when using clamps. and 0.31 kg/s and 395.2 particles/s when without the Cyclone packaging Hammer Mill clamp, which with the clamp is able to minimize loss good by 26.3%

Keywords — [Reverse Engineering, EDEM, Hammer Mill, Packaging Machine]