

ABSTRACT

Bank Sampah Induk Hijau Lestari is a UMKM that produces dry chopped plastic with a production flow starting from the sorting process, cutting process, washing process, drying process, and packaging process. Cutting process using cutting machine can produce 4000 kg/month (168 kg/day), but drying process only produce 1000 kg/month, there is gap between production of chopped plastics and drying process. The gap is caused by queue for 5 days and its caused by the drying process of 168 kg chopped plastic for 5 days. Analysis from the fishbone diagram shows that BSI Hijau Lestari need equipment in the drying process that can increase number of dry chopped plastic. This research was conducted to design drying machine using the Rational method. The data used in this study are of two types namely primary and secondary data. Primary data in the form of water content, density, volume of chopped plastic, while secondary data in the form of a type of drying system. The selected drying system is a rotary dryer. A rotary dryer is a tube-shaped drying machine placed horizontally with a circular motion. The rotary dryer is able to produce 168 kg of dried chopped plastic in two production times with a total time of 4 hours.

Keywords : Dry Chopped Plastic, Rasional Method, Rotary Dryer