

## **ABSTRACT**

*The resulting coffee grounds waste from coffee concentrate production is quite abundant, where the amount of coffee grounds waste produced by the Aroma Kahuripan production house is 1940,125 grams per week with an average percentage of 40.64% per week from the coffee concentrate produced. Coffee grounds waste will be collected in one container, then thrown away in the yard of the production house. Therefore, it is necessary to implement a circular economy, which is a way to manage the resources produced so that they are still utilized and do not end up as waste that is thrown away haphazardly. Based on the existing problems, the solution to optimize the processing of coffee grounds waste to produce briquette products is to design a briquette printing machine that pays attention to quality and adapts to user needs. Based on these conditions, the Quality Function Deployment (QFD) method was chosen. This decision is based on user needs. Then, a systematic process is carried out using QFD to determine specifications, based on customer need data obtained through observations and interviews. The design of the briquette printing machine has a capacity, drive and dimensions that are adjusted to the user's body size, as well as user needs. With product noise levels not exceeding 70 dB and the time required for product maintenance not exceeding 3600 s. Apart from that, the process of operating the product is easier with 6 stages, making it easier for users to operate the product and there are changes to the shape of the mold. Designing a briquette printing machine product is a solution that can be used by Aroma Kahuripan in carrying out the briquette production process from coffee grounds. The machine designed meets user needs and is effective in optimizing waste processing at Aroma Kahuripan. Apart from that, the existence of this briquette printing machine has proven to be helpful in implementing a circular economy at Aroma Kahuripan.*

**Keywords - Coffee, Coffee Grounds Waste, Briquette Printing Machine, Quality Function Deployment, Circular Economy.**