

## **ABSTRACT**

As a living being, food is a need that needs to be met at any time. Alternative feed from the results of the rest of the farm or garden is very necessary to support the needs of livestock. Therefore, it is necessary to have a tool to process the remaining agricultural products into feed that can be consumed by animals. C.V. Kembar Mekar is a company in the field of food processing, especially as a company processing agricultural waste into animal feed. This company uses a Hammer mill as a grinding tool for animal feed ingredients that works by crushing raw materials through the gaps between the hammers and "landing" on the sieve. Material with a size smaller than the filter hole will come out as a product while the larger material will be carried away again by the hammer so that further pounding occurs. However, in the processing process, problems were found for the workers who served as inputting raw materials into the input holes. Meanwhile, based on the calculation of RULA and REBA, scores of 7 and 9 were obtained, which means they have a high risk and cause the existing design to be not ergonomic so that workers experience musculoskeletal disorders, therefore it is necessary to make changes to the product design.

The author uses reverse engineering as a method to solve these problems. Because reverse engineering is a development process to improve or improve existing products for the better.

The result of this research is a bucket elevator design as a tool to help transport raw materials to the top. It aims to improve the work flow and posture of the operator. Then the manufacture of a bucket elevator raw material flow mechanism uses a simulation that aims to see the current flow of raw materials.

The benefits obtained from the design of the bucket elevator to be effective are helping workers to transport raw materials to the next process that makes the posture of C.V. workers. Blooming Twins just got better. Knowing the optimum speed rotation so that it becomes more productive. As well as reducing the risk of work accidents experienced by operators on C.V. Blooming Twins.

***KEYWORDS - [Hammer Mill, Bucket Elevator, Hopper, RULA dan REBA, Reverse Engineering]***