

ABSTRACT

The use of soy bean husk separator at Rumah Tempe Indonesia (RTI), Bogor, is still the longest process compared to other processes, which is 70.77 minutes. In addition, this machine can only clean about 41% of soybeans. However, this amount is still far from the target of soybean hygiene (90%) that is applied at RTI. One of the reasons is that nylon brushes installed on the soybean husk separator container are not able to release the peel optimally. The brush that is placed on the container is static so that when the agitator rotates water and soybeans, many soybeans are attached to the nylon brush. In addition, peeling soy beans is not evenly distributed in all nuts. To overcome this, it is necessary to re-design the agitator so as to provide the right distribution of material flow and improve the level of cleanliness of soybeans using machines. Thus, a reverse engineering approach needs to be applied to redesign the agitator to assist the release process and the separation of soybean husk. This approach is used because the existing design is reviewed to create a new design. From this design result, a modified anchor impeller type agitator design was found that was able to reduce cycle times by up to 150 minutes each month.

Keywords: *soybean peel separator machine, tempeh, reverse engineering, redesign methodology.*