DESIGN AND BUILD A SORTING MACHINE AT IKM REPULBLIK TANI MANDIRI KUCUR VILLAGE

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This study aims to design a sorting machine that is able to speed up the sorting process and the results of the seed sorting process more accurately and conduct financial analysis at the RTM (Small and Medium Industry of the Republic of Tani Mandiri) IKM in Kucur Malang village, East Java. This research method uses live interviews to obtain primary data directly from RTM IKM members. *Design Thinking* is used to make it easier to understand the problems experienced and identify alternative strategies and solutions by developing an understanding of the people who are the target researchers in designing products or services that can review and develop empathy for users.

The result of making a manual tool based on a request from the RTM aims for the RTM to be able to maintain the tool mechanism properly and not consume resources, namely excess electricity and make it easier to use the tool and get an accurate seed size by equalizing the size of the hole in the tool using the same size as the sieve used by RTM. Every aspect of the requested needs has been achieved and the coffee bean sorting process time is also faster, with a time of 5 minutes the coffee bean sorting tool can sort 1 kg of coffee beans accurately.

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