

"Design And Development Of A 3D Autodesk Inventor Model Of An Automatic Stirring Machine For *Petis Kupang* Processing In Small And Medium Enterprises (UMKM)"

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ABSTRACT

Petis is a processed by-product derived from the boiling of shrimp, fish, and *kupang* (a type of mussel), which requires continuous stirring to achieve a consistent texture and flavor. In manual production processes, inconsistencies in temperature and stirring duration often result in unstable product quality. This research aims to design a 3D model and implement an automatic petis stirring machine to improve efficiency and ensure product quality consistency. The 3D design was created using Autodesk Inventor 2022 to minimize implementation failures, as this allows designers to accurately determine the planned dimensions and assess the feasibility of the product based on expert validation in the field of mechanical design. Through the use of stress analysis methods, designers can also evaluate the tool's reliability before actual implementation. Final testing results showed that the machine was capable of maintaining a stable temperature and stirring speed throughout the process, thereby producing petis with more uniform color, texture, and aroma. Therefore, the use of this machine has proven to be effective in enhancing the quality and productivity of petis production in a sustainable manner.

Keyword : Petis, Autodesk Inventor, Stress Analysis