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Automatic Tofu Stick Cutter to Increase the Production Capacity of Small and Medium Enterprises

Authors : Chaca Nugraha Zaid, Hikmat Ronaldo, Emerald Falah Brayoga, Azizah Eddy Setiawati, Soviandini Dwiki Kartika Putri, Novita Wijayanti

Abstract : In the tofu stick production, the manual cutting process takes a half of working day or 4 hours for 21 kg of tofu. This issue has hampered the small and medium enterprises (SMEs) to increase the capacity of production to fulfill the market demand. In order to address the issue, the cutting process should be automized to create fast, efficient, and effective tools. This innovation to tackle this problem is an automatic cutter tool that is able to move continuously to cut the tofu into stick size. The tool uses the 78,5-watt electric motor and automatic sensors to drive the cutting tool automatically, resulting faster process time with more uniform size compared to the manual cutter. The component of this tool, i.e., cutting knife and the driver, electric motor, limit switch sensors, riley, Arduino nano, and power supply. The cutting speed cutting speed of this tool is 101,25 mm/s producing 64 tofu sticks. Benefits that can be obtained from the use of automatic tofu stick cutter, i.e. (1) Faster process (2) More uniform cutting result; (3) The quality of the tofu stick is maintained due to minimal contact with humans so that contamination can be suppressed; (4) The cutting knife can be modified to the desired size of the owner.

Keywords : automatic, cutter, small and medium enterprise, tofu stick
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