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Design and Development of an Automated Dosa Making Machine for Medium Scale Productions

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ABSTRACT

Dosa is a typical South Asian meal that is frequently found in South Asian households. Dosa is often prepared on a nonstick pan with a spatula, which demands patience and constant attention while cooking. Manual processing is inadequate to cope with the increased demand for small and medium industries. These systems must be streamlined in order to meet demand and supply more effectively and efficiently. This study proposes an automated device that is more cost effective, user friendly, and hygienic to be used in mall and medium industries. The proposed system incorporates four distinct mechanisms for completing the various stages of the dosa-making process, which include dispensing, spreading, cooking, and removing. During the cooking process, one side of the Dosa is baked using the heatgenerated by an induction eater, while the top is steam baked cycle time taken to prepare one dosa from the developed automated system was measured 1 min. As a result, approximately 58 dosa can be prepared per hour. On average, a dosa weighs roughly 110 g. The mass flow rate of the dosa batter is calculated to be 36.67 g/s. This proposed technique is capable of making dosas measuring 6 to 8 cm in diameter.the main aim of this work is to conceptualize,design and fabricate a fully functional automated, to make dosa easily throughout its working cycle without requiring human intervention, and to modernize the traditional dosa-making process in order to create a lightweight and portable dosa-making machine. This automatic dosa-making machine is ideal for restaurants and household kitchens, as it significantly reduces the amount of time spent on the procedure.

Keywords: *Dosa, Food processing, Automation, Cooking*