MIXER AND MILLER MACHINE FOR MEAT BALL SOUP INGREDIENT

ABSTRACT

By
Didik Nurhadiyanto, Sudiyatno and Suprato Rachmad S.

Mixer and miller machines for ball soup ingredient are widely used. Mostly the machines have disadvantages such as they are expensive (about 10 millions rupiah), have a big construction and need a big power (with 10 HP diesel engine). The machines are lost big energy due to friction between the mixer and its lid. Vucer program in 2002 meant to produce a cheaper and smaller mixer and miller machine. To do this program, steps were made as follows: (1) designing a new construction based on the existed machines, (2) modification was concentrated on minimizing friction occurred in the machine, (3) using an electric motor to make a simpler construction, (4) upgrading to improve the new machine’s performance. From the testing, it can be shown that: (1) speed of the motor is 2,800 rpm, speed of the mixer is 420 rpm, speed of the mixing process is 280 rpm, (2) the machine is 1.5 m long, 0.6 m wide and 1.5 m high, (3) one mixing process needs 3 kg of meat, 1 kg of wheat flour and spices (garlic, salt and pepper), (4) meat milling process needs 3 minutes, mixing of all ingredient needs 7 minutes and process of setting machine and servicing one consumer needs 2 minutes, so the hall processes needs about 12 minutes, (4) the new machine has a higher efficiency and the product has a good quality appearance with a strong meat flavor and no meat fiber left.

Key words: meat, miller, mixer and meat ball soup