

## **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