

## **DEVELOPMENT OF MINIATURE MUDDE MAKING MACHINE**

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### **Abstract**

The specified machine is capable of produces 3 to 4 mudde in 20 minutes. This machine is useful for domestic usage and also for small hotels.

The conventional method of preparation of mudde is laborious and time consuming. To ease the preparation of mudde and to save time, a machine is designed. The machine consists of a stainless-steel tube which houses a stainless-steel screw conveyor. The stainless-steel tube assembly rests on a mild steel stand. The other components of the machine are; feeder (hopper), handle, exit cone, Plummer block bearings.

**Key words:** Mudde, Ragi, Screw conveyor, Stainless steel tube

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### **1. Introduction**

Ragi mudde has only two ingredients, the Ragi flour and water. A known quantity of water is boiled in a wide mouthed vessel. And Ragi floured is poured gradually into boiling water.



Fig 1. Ragi Mudde

With the help of a wooden stick the lump is kneaded to get smooth dough like consistency with no lumps. This hot dough is then rested on low heat before rounding them on a wooden board into medium sized balls with wet hands. The prepared Ragi balls are served along with sambar.

### Parts Dimensions

<b>SS TUBE</b>	60mm diameter, 160mm length,
<b>SS SHAFT</b>	20mm diameter, 320mm length
<b>PLUMMER BLOCK</b>	20mm diameter bearing
<b>CAST IRON FLANGE</b>	120 mm external diameter, 60mm internal diameter, 5mm thickness
<b>ALUMINIUM FLANGE</b>	120mm external diameter, 20mm internal diameter, 200mm length
<b>OIL SEAL</b>	20mm diameter seal
<b>EXIT CONE</b>	30mm length
<b>CUP</b>	90mm diameter

### Isometric View of Model

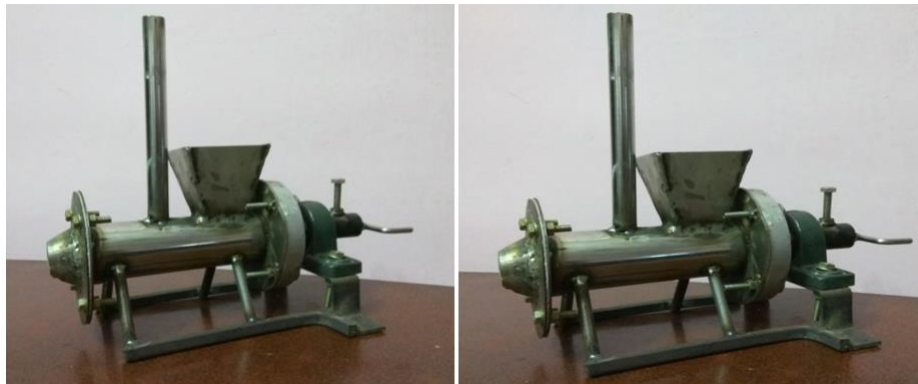


Fig 2. Mudde Making Machine

### Procedure

- The machine consists of Stainless steel Tube, Flange, Screw conveyor, Plummer block, Hopper, Exit Cone, Stand, and Handle etc.
- Required quantity of water is poured into the stainless-steel tube housing through hopper. Heat is supplied to the housing with the help of Gas stove.
- When water boils, some amount of flour is poured. With the continuous supply of heat, the batter gets getting hard. After few minutes, stop the supply of heat.
- The process in the preparation of the mudde is kneading. Conventionally, kneading is done manually.
- kneading and thorough mixing of lump of mudde is done using screw conveyor by rotating the handle which is mounted at one end of the screw conveyor.
- After kneading, the lump of mudde is taken out by opening the end cap through the exit cone by rotating the handle. The mudde is then taken into the cup to have hemispherical shape.

## Results

- It costs about ₹ 3000.
- Time required to prepare mudde is 20 minutes and it produces 3 to 4 mudde.
- It is used in houses.
- It is continuous process of making ragi mudde.

## Advantages

- Low cost.
- Procedure is more hygiene compared to manual.
- Reduction in time.

## Conclusion

- Three to four mudde is prepared within 20minutes. The device can be made used for other types of flours are Jower, Rice
- This device is not specific only for ragi. I.e. other type of flours can also be made used like Rice, Wheat etc.
- The cost of the machine is ₹ 3000 and Operation is simple.

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