

AUTOMATIC CONTINUOUS FOOD COOKER

1. Introduction:

Catering is developing rapidly with the spread of services in large firms and industries, central kitchen for chain restaurants and the lunch supply scheme for schools. Accordingly, the present age requires large food cooking plants. Presently, batch type or semi continuous cooking units using jacketed kettles heated by steam are adopted in institutional cooking. Since the texture carries between batches a uniform product as desired by a consumer cannot be consistently prepared. These units are labour oriented and are not economical when large scale applications are envisaged. Due to batch operations the hygiene is also poor. Hence the need arises for the development of a continuous cooking unit having a large capacity along with circumventing above defects. The consumer preference for the product namely fluffy individual grains with cooked flavour or optimally cooked vegetables without the loss of their integrity have to be achieved consistently in the large-scale unit.

2. Process:

Food products like rice and other grains or cereals are cooked in water, which is absorbed by the product as cooking proceeds. However, vegetable are cooked directly in steam, without water. The cereal are boiled, steamed and heated again to evaporate surplus water and to obtain whole grain cooked product. The two important variables in cooking of foods are the amount of water and the control of heating. The water to product ratio is important in keeping product form being either too hard or too soft. Controlled heating ensures that grains are lightly heated and cooked completely to the core of the grain.

3. Special feature

The equipment is a continuous conveyor with a facility for open steaming into the chamber. A water inlet is provided through a flow meter to add a measured quantity of water during processing. The chamber is steam jacketed for additional heating. A variable speed drive is used to vary the residence time of cooking. A rotary valve is fixed at the inlet end to control the material feed rate. The conveyor speed and the rotary valve speed are matched with socket and chain drive. A stationery water draining device having a stainless steel trough, stainless steel and the nylon sieving screen is installed at the discharge end of the machine, which largely helps quick separation of water from cooked grains.

4. Market potential:

As the consumer demands nutrient food combined with hygiene, the food manufacturers are looking for machines that can deliver consistently good quality cooked products hygienically. Also, one versatile machine that can cook all the ingredients for the preparation of the product is preferred over individual equipment. Continuous machines are the order of the day rather than batch type machines as it is difficult to maintain the consistent quality.

5. Raw materials:

MS. Angles, SS sheets, Bearings, Motor

6. Patent rights

The machine is covered by an Indian Patent and the right to utilize the patent would be granted to the CFTRI licensee.