Cooking Extruders for Pregel/Modified Starches

We offer Cooking Extruders for cooking/modification of native starch obtained from maize (corn), cassava, potato, wheat, etc. Native starch is cold water insoluble. But cooking and modification of this starch makes it cold water soluble and also imparts many desirable properties to the native starch. E.g pregelatinised starch is used in food industry to thicken gravy, sauces. In the medium and long run starch will play an increasing role in the field of “renewable raw materials” for the production of biodegradable plastics, packaging material and moulds. Starch is used by pharmaceutical, food, textile and adhesive industry. All these applications demand precooked and chemically modified starch for desirable properties.

Modifications give starch its specific and desired properties. Derivatisation technologies aim for modifications of the natural starch properties or for the establishment of new ones for utilization of starch in different applications. Thus starch molecules are degraded, chemically modified by introduction of functional groups Chemical modifications (derivatisation) are carried out for enhancement of specific starch properties. For this purpose the starch molecules are modified using different techniques such as substitution reactions, cross linking reactions, degrading reactions and starch fractionation

Extruder Cooker is ideal for carrying out the cooking/modification of natural starch. The Extruder cooks the starch with added ingredients at elevated, controlled temperatures inside a screw/barrel unit. It discharges from the Extruder in form of short lengths- a cutter continuously cuts the cooked starch as it emerges from the extruder. The modified & cooked starch is dried in a dryer to remove excess moisture and ground to free flowing granules on suitable milling equipment.

Range offered for Starch Extruders: 100 Kg-500 Kg/Hr. Pilot model for research also available.

Extruders for Aquafeed production

(suitable for floating pellets)

Cooking Extruders are also used in Aquafeed production. The premixed raw-material ingredients are transferred to the cooker extruder, after mixing and steam injection in preconditioner to precook the ingredients. The extruder fully cooks the ingredients by means of a single screw rotating inside the barrel at high speed to generate the required mechanical shear and friction to cook the ingredients. The discharge of Extruder is provided with many circular holes through which the cooked product emerges and expand or “puffs” due to rapid expansion of steam from the product, and it is simultaneously cut into small lengths by the action of die face cutter.
The excess moisture, as usual, is removed in Dryer. Colours, fats, etc. are applied in a coating drum and the product is packaged and stored for dispatch. Floating feeds are characterised as low density products.

Range offered of Aquafeed Extruders: 100 Kg-500 Kg/Hr.

Manufacturers:

MALIK ENGINEERS

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