

POTATO (POTATO, SWEET POTATO, CASSAVA, ETC.) STARCH PRODUCTION LINE

PRODUCTION LINE INTRODUCTION

PURIFICATION AND CLEANING SYSTEMS

Before fresh potato raw material enters storage, impurities should be removed as much as possible. Potato starch processing plants in Europe generally only self-store potato raw materials for 3-7 days. Potatoes and sweet potatoes are transported from the storage warehouse or storage pond with water through a flow-through trench (cassava is in the yard by a forklift) to the pretreatment plant, where they are lifted, weeded, de-stoned, washed by rotary drums or prize washed, and then sent to the potato raw material storage hopper by an inclined belt conveyor. The washing water from each stage of the washing equipment is discharged into a sedimentation tank, through which it is purified and recycled.

GRINDING

The potato materials in the storage hopper of the cloner mill are conveyed to the cloner mill by a speed-regulated feed screw feeder. The rotor of the cloner mill is equipped with saw-like blades to crush the potato materials.

EXTRACTION OF CYTOSOL (JUICE)

Separation of the sap from the potato material by decanter centrifuge to extract the protein.

SIEVING (STARCH EXTRACTION)

After separating the juice, the potato pulp is added with water and pumped by a screw pump into a multi-stage centrifugal sieve to separate the starch milk from the fibers.

REFINING

After desanding, the starch emulsion enters the multi-stage cyclone for cleaning and purification. Remove impurities such as fine fiber protein. The pure starch milk enters the refined starch milk tank.

STARCH DEWATERING

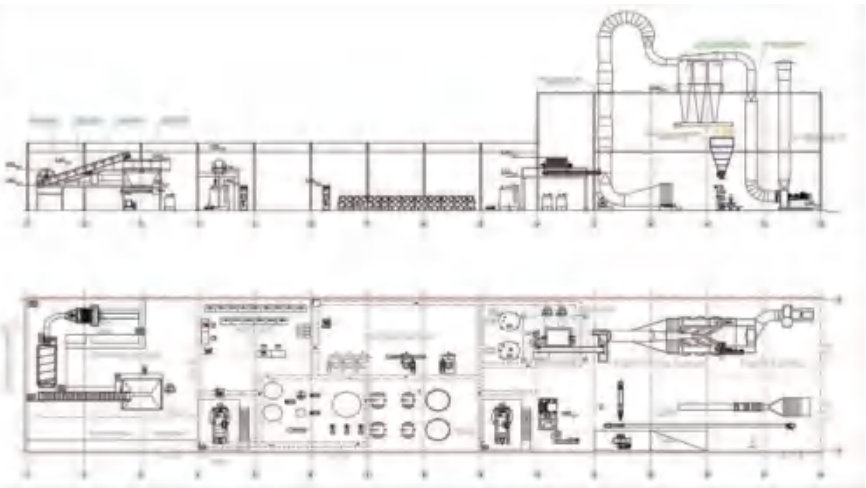
The refined starch slurry is dewatered by "residual cake" type vacuum dewatering machine or scraper centrifuge to the moisture content of ≤40%. The dehydrated starch is transported to starch drying section by screw (or belt) conveyor.

DRYING

It is fed into the airflow drying unit for drying by the feeder through the material lifter. The airflow drying unit is composed of heat exchanger, feeder, material lifter, pulse drying tube, cyclone separator, screw conveyor and so on.

PACKING

Dry starch with moisture content of ≤20% enters into the finished product warehouse, enters into the automatic bagging weigher through the material control machine, packs and sends into the finished product warehouse for storage until the end of this starch production process.



POTATO, SWEET POTATOSNOWFLAKE WHOLE FLOUR PRODUCTION LINE

PRODUCTION LINE INTRODUCTION

Potato and sweet potato snowflake powder is made from high quality potato and sweet potato with high content of dry matter, after washing, peeling, slicing, rinsing, cooling, steaming, mixing, tempering, drying, sieving and other procedures, with a water content of less than 10% of the powder.It is a kind of low fat, low sugar, can maximize the maintenance of potato, sweet potato in the original high content of VB1, VB2, Vc and minerals such as calcium, potassium, iron and other nutrients of potato, sweet potato products, nutrition at home and abroad known as the "ten perfect food".

PRODUCTION PROCESS OF POTATO AND SWEET POTATO SNOWFLAKE FLOUR

Raw material → cleaning → steam peeling → thousand brush peeling → cleaning → inspection → slice → cleaning and rinsing → cooling → steaming mud → conveying → drum drying → crushing and sieving → pulverizing → collecting and removing dust → packaging → finished product

PURGE

Clean the surface of potatoes and sweet potatoes in a washing machine to remove impurities from the skin.Steam peeling. Remove skin in steam peeler.

STEAM PEELING

Remove the skin in a steam peeler.

SLICING

The thickness of the slices should be 8~12mm.

PRE-COOKING AND COOLING

Pre-cooking is done by slicing the washed potatoes and immediately feeding them into a pre-cooker at 71-74 C for 20-30 minutes to inactivate the enzymes and protect the color. Then it is cooled in water at 25 C for about 20 minutes.

STEAMING

The chips are cooked in a spiral cooker, belt cooker or tunnel cooker.

DRYING

The finely ground potato and sweet potato thin paste was given to single drum dryer for drying.

CRUSH

After drying, thin slices of potatoes and sweet potatoes are crushed into scales (like fine flaky snowflakes) with a hammer mill.



ACQUISITION OF WAREHOUSING EQUIPMENT

PRODUCTION LINE INTRODUCTION

In the deep processing of agricultural products, the acquisition of raw materials and warehousing is very important to ensure that the raw materials are collected without damage, during the period of sampling, quality control, weighing, but also to complete the unloading of vehicles, in addition to impurities, transportation, fabric, ventilation, dehumidification A series of operations.

De-mucking includes soil removal, stone removal, and weed removal. Weeding can be done at the harvesting site or at the processing plant when unloading the trucks. It is better to remove the weed at the harvest site to reduce the cost of conveying and the cost of secondary transportation of debris in the plant and also to make the plant purchase site clean and tidy.



ACQUISITION OF WAREHOUSING EQUIPMENT INCLUDES

- ▲ **MOBILE DE-HYBRIDIZER**
used for de-hybridization at harvesting site.
- ▲ **STATIONARY DE-HYBRIDIZER**
used for de-hybridization when unloading trucks at the site of in-plant purchase;
- ▲ **UNBAGS MACHINE**
used for in-plant acquisition site unloading of textile bags when the crack and raw materials and bag separation and bag recycling;
- ▲ **SAMPLING EQUIPMENT**
including automatic sampling machine, quality control cleaning machine, sub-inspection platform, measuring scales and testers.

CLEANING EQUIPMENT

EQUIPMENT INTRODUCTION

Cleaning equipment all roots and starchy crops deep processing must go through the process. There are mainly de-stoning, rotary drum (squirrel cage) cleaning paddle washing machine, brush cleaning machine.



CRUSHER

EQUIPMENT INTRODUCTION

The crusher adopts the "spiral type" mechanism, which is suitable for cutting sweet potato and cassava into small pieces or segments, and is mainly used in the pre-crushing of sweet potato and cassava starch before it enters the clanging mill.



VACUUM DRUM DEHYDRATOR

EQUIPMENT INTRODUCTION

Vacuum drum dewatering machine is a solid-liquid separation equipment, a set of units, consisting of drum dewatering machine vacuum pump, vapor separator, filtrate pump and so on. It is suitable for starch industry and chemical industry. Dewatering area 2m2-30m2, according to the feeding method is divided into two styles: upper feeding and lower feeding.



DRYING EQUIPMENT

EQUIPMENT INTRODUCTION

Drying equipment is a necessary unit operation equipment for starch production and chemical production process. Air flow drying is suitable for drying powder materials, the moisture content of wet materials is less than 40%. Such as starch. Equipment specification 0.5t/h-20t/h

Flash drying is suitable for drying viscous materials, the moisture content of wet materials is less than 70%. Such as protein drying tower diameter 800mm-2000mm

Belt drying is suitable for the drying of materials that need longer drying time, such as the drying of various potato chips, vegetables and fruits.



CENTRIFUGAL SIEVE

EQUIPMENT INTRODUCTION

Used to separate starch and fiber. Continuous production, can be used as a single machine or in groups, countercurrent starch extraction technology. Mainly used in potato starch, sweet potato starch, cassava starch, wheat starch, rice starch, corn starch and other industries



FILE GRINDER

EQUIPMENT INTRODUCTION

File mill is a necessary equipment used for wet production of slurry, mainly used for decomposition and crushing of potato starch, sweet potato starch, cassava starch and other root starch crops. It can be used for crushing and grinding of soaked corn, rice, beans, crushing of sugar beet processing and so on.



POTATOES,CORN,CASSAVA PUERARIA AND SWEET POTATO STARCH & FLOUR PRODUCTION LINE



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