

Particleboard (also called chip board) with density of 500-750kg/m³ is made on the basis of wood branches, wood waste, reed, cotton stalks, bagasse by adding Urea-formaldehyde resin. PB boasts the most extensive applications because it possesses a great number of merits such as uniform and smooth surface, gradual-changing structure, superior heat insulation, superior sound insulation and superior performance of machining and shaping at the surface and edge, it can be decorated as painting on the surface, laminating or printing wooden strips on the surface, it can be used in furniture-making, sound box, construction and decoration of vehicle or vessel etc.

The particleboard production lines assemble with drum chipper, flaker, roll dryer/rotor dryer, air-flow/mechanical forming machine, and single/multi opening hot press etc. In the production lines, vital electric appliances parts and mechanical accessorized are all adopt international kit.

The production line mainly consists of chip preparation section, drying sifting and milling section, glue bending application section, mat-forming section, hot-pressing section, edge-trimming section and electric control system.

Particle board production technological process

1. Raw material introduction



Small-diameter logs, tree branches and twigs, industrial wood residue (log cores, crushed veneer, log offcuts, plywood trimmings and waste particleboard, etc.) are used to produce gradual changing structured particleboards.

2. Production process introduction

2.1 Raw material preparation section



Raw material of the particle board production line after chipping and sifting treatment will be conveyed into chip silo for transit storage. Then the chip will be conveyed into flaker for flake preparation and the well prepared flake will be conveyed by conveyor into wet flake silo for transit storage.

2.2 Drying, sifting and grinding section



The wet flake will be conveyed by conveyor into dryer for drying and the qualified dried core-layer and surface-layer flake after sifting will be conveyed by conveyor into dry core and surface flake silo for transit storage. The oversize flake after grinding by grinder will be conveyed into dry surface flake silo for transit storage.

2.3 Glue mixing section



The qualified dry surface and core flake after metering respectively by flake metering silo will be conveyed into glue blender, and meanwhile, the glue blending and applying section supplies the glue which meets the requirement of the process into glue blender. With the well mixing of flake and glue by surface and core blender, it can uniformly mix and apply the glue.

2.4 Forming and Pressing section





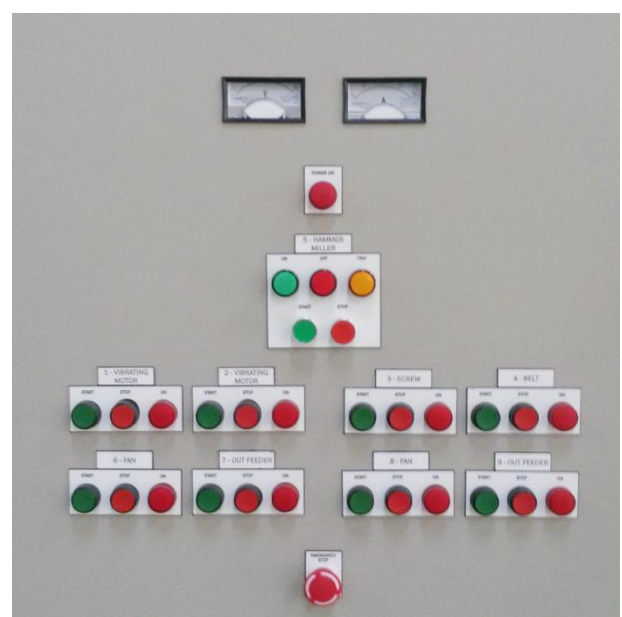
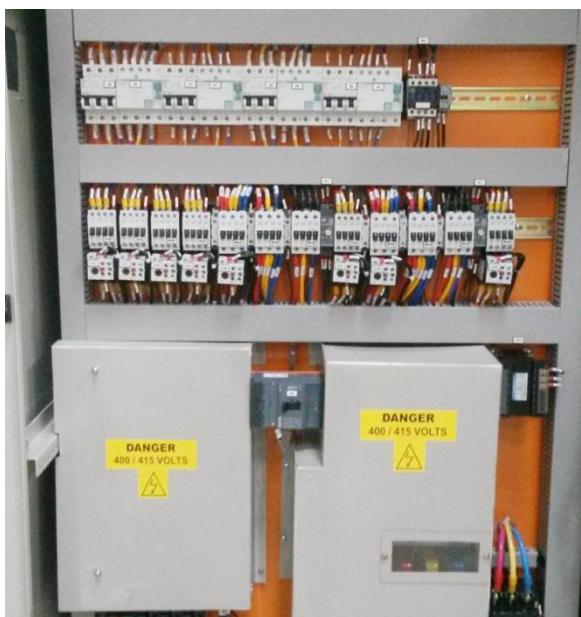
Flake applied with glue will be respectively conveyed into mechanical classifying machine which forms uniform and even mat. The mat will be sent to cage of loading machine through permanent magnetic separator, pre-press, edge trimming saw, cross saw, accelerating conveyor, weighing conveyor and storage conveyor and loading conveyor, etc. The cage of loading machine will send the mat into multi-opening hot press for pressing and the pressed raw board will be pushed into

unloading machine by tray of loading car.

2.5 Cooling and trimming section

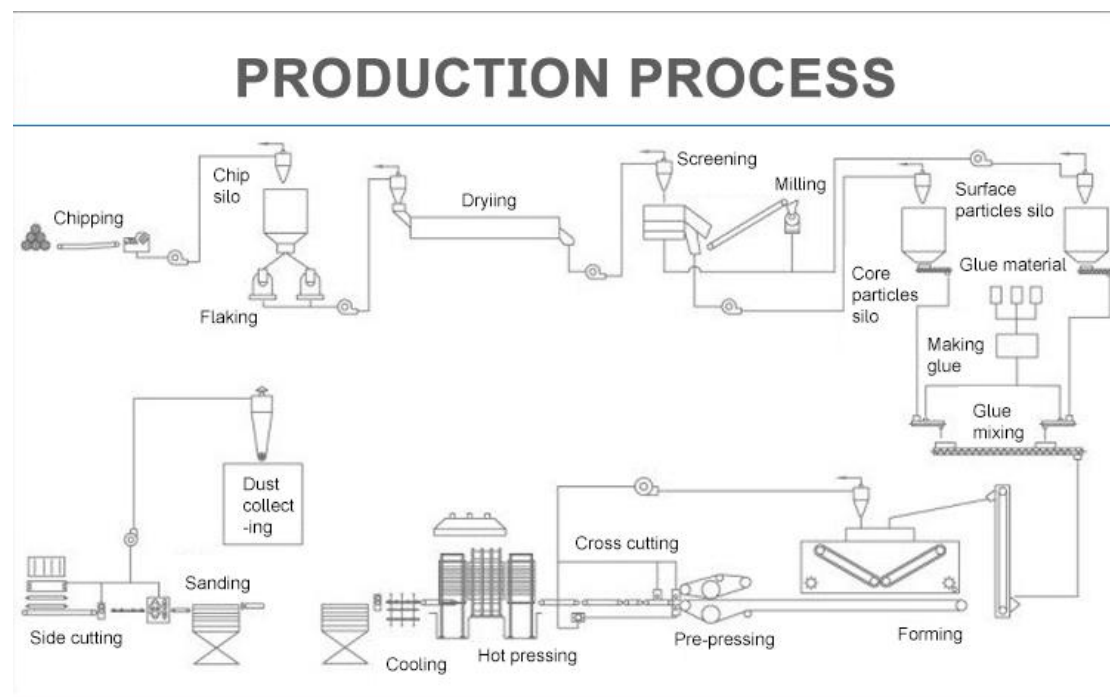


Raw board in the unloading machine will be sent to infeed roller conveyor by unloading conveyor, and then into star cooler for cooling. The cooled raw board in the star cooler will be sent by the outfeed roller conveyor into transversal and longitudinal edge saw for cutting and finally sent by dry board conveyor into lift table for stacking.



3. Features of the particleboard production line

- a. Wide range of raw materials. Stable supply of raw material guaranteed.
- b. Low glue consumption. Electronic dosing ensures continuous, stable and accurate dosing, realizing inline flow detection..
- c. Diamond rolls help achieve ideal forming results. The quality of the finished product is improved.
- d. The synchronization of closing of the multi-opening hot-press speeds up platen closing. Particle mat is heated uniformly, and the precuring layer is reduced, and board thickness is precisely controlled.
- e. All electric control systems of the production line use elements by world famous suppliers, ensuring accurate and stable control. PLC control guarantees stable and reliable performance.



Final products

