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Wood Pellet Lines

Pelletizing is the process of making waste materials into solid fuel. The objects are used for burning/heating purposes. Wood Pellet is one of the most commonly used pelletizing materials.

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Technological process of granulation line

Pellets wet content - 8-14%.
Pellet size (diameter) - 6 and 8 mm.
Feedstock size must be (4-5cm)

For additional grinding of wood using a hammer mill/chopper is possible before intake into plant. The crushed product is fed into the hopper shredders. In the bunker is installed a mixer, which does not hang evenly and loads the product unto the dispenser. It is also used as a storage bin. Feeder works evenly to maximize the load granulator with frequency converter on the control panel. From feeder product gets into the granulator, which consists of a mixer and press granulator. The product is uniformly fed to the mixer, where it is moistened with steam to a moisture content 12-14% required for granulation, and intensively stirred stirrer. From the mixer, wetted product is displayed in the press. In the chamber press consistency of the product is delayed between the rotating matrix and the press rollers and is forced into radial holes of the matrix, where under the influence of high pressure, the formation of granules takes place.

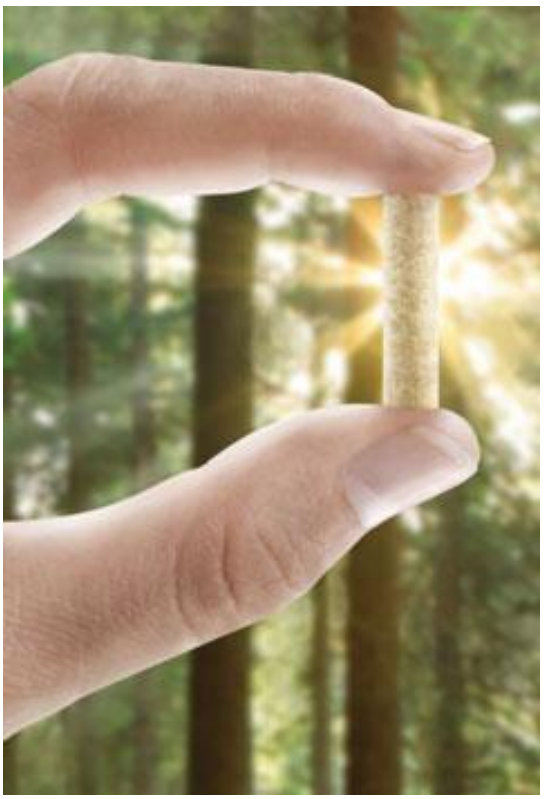
Extruded from the holes granules encounter on the stationary knife and are cut off. Cut beads fall down and through the pipe casing removed from the press. Finished pellets are high temperature and fragile, so they must be cooled. For belt-scraper floor pellets are fed into a column of cooling. In the inlet chamber is a cooling chamber of the column. At the same time it runs through a layer of granules in the chamber where cooling air flow is generated by a fan. It cools the granules and lowers the humidity. Filling the coolant is up to the upper level. Further opening the gate valve granules, uniformly fed to documentation services, where the separation of granules from the granulating part takes place.

Continuance to prepare granules come in big bags or in polyethylene bags (packaging equipment for pellets comes separate as needed)”

Pellet Mills

A pellet mill is a type of mill used to create cylindrical pellets from a mixture of dry powdered feedstock, such as flour, sawdust, or grass, and a wet ingredient, such as molasses or steam. The pellets are made by compacting the mash or meal into many small holes in a die. The die is usually round and the pellets are pushed from the inside out. Pellet mills are used in the production of animal feeds, and of wood and grass fuel pellets for use in a pellet stove.

Pellet mills are unlike grinding mills, in that they combine small materials into a larger, homogeneous mass, rather than break large materials into smaller pieces. In this way, pellet mills are similar to extruders.



Pellet Production

1. Raw material (Feedstock):

(a). Wood pellets can be made from sawdust, wood shavings, wood chips or wood logs, any wood wastes or biomass.(b). Feed. Particle size of the wood should not exceed 4-5 cm. The waste is stored in storage and system takes the material by means of pneumatic loading. There is no need any manpower but just to bring the material to the site.

2. Involved processes:

Depending on the input product, which can be dry wood shavings, wet sawdust, wood chip and etc. Directly before the pelleting press, a product with a granular size of approx. 6-8 mm and a residual moisture content of approx. 8-14 % is required. The mainly processes are: Wood crushing (if the raw material is not already granulated), material sifter, drying (if the raw material contains too much moisture), pelletizing, cooling and bagging. The whole process is highly automatically controlled.

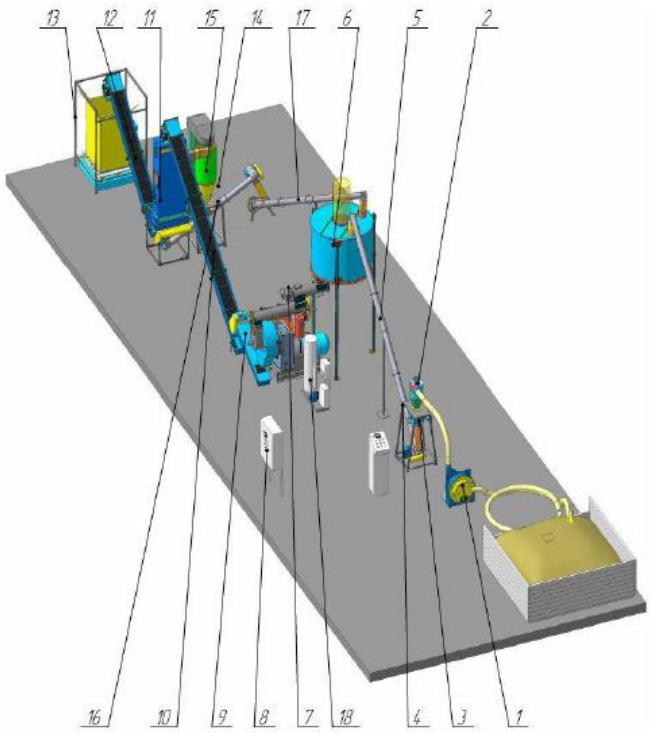
3. Production capacity:

1,5 metric ton per hour to 6 metric ton per hour are available.

1) Reliable continuous operation. 2) Low energy consumption . 3) Low maintenance cost

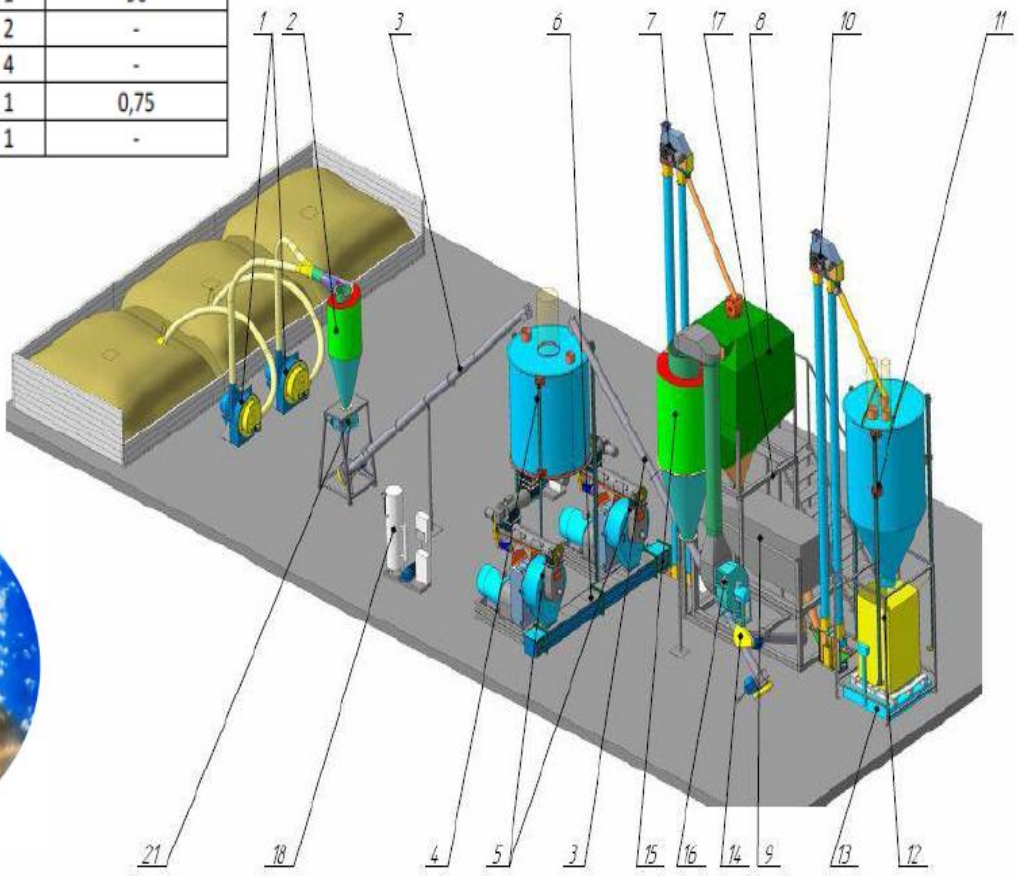
Technological scheme of granulating plant, 1,5 tons/hour capacity

Pos.	Item	Quantity	Capacity kW
1	Crusher	1	22
2	Settler	1	-
3	Electrically driven gate	1	-
4	Settler frame	1	(110+2,2+0,75)x4
5	Screw transporter T-403 L=6m	1	2,2
6	Bunker with agitator V=2,5 m3	1	1,5
7	Granulator with dosing unit and matrix d-8mm	1	110+2,2+0,75
8	Granulator control panel	1	-
9	Chain-belt conveyor L=2m	1	0,75
10	Chain-belt conveyor L=6m	1	0,75
11	Cooling tower	1	2,2+0,37
12	Chain-belt conveyor L=4m	1	0,75
13	Big bag frame	1	-
14	Screw transporter T-403 L=3m	1	2,2
15	Settler 1,5	1	-
16	Settler frame with gate	1	-
17	Screw transporter T-403 L=8m	1	2,2
18	Steam generator	1	60
19	Electronic weighing machine 3t	1	-
20	Control panel	1	-



Technological scheme of granulating plant, 3 tons/hour capacity

Pos.	Item	Quantity	Capacity kW
1	Crusher	2	18,5x2
2	Settler	1	-
3	Screw transporter T-403/L=7m	2	2,2x2
4	Bunker with agitator	1	4
5	Granulator with dosing unit and matrix d-8mm	2	(110+2,2+0,75)x2
6	Chain-belt conveyor L=4m	2	0,37x2
7	Bucket chain H3-10/7	1	2,2
8	Cooling tower	1	2
9	Pellet grader Q=5 t/h	1	2,2
10	Bucket chain H3-10/6	1	2,2
11	Finished product bunker	1	-
12	Big bag frame	1	-
13	Electronic weighing machine 3t	1	-
14	Screw transporter T-403/L=2m	1	2,2
15	Settler	1	-
16	Ventilator	1	11
17	Column and pellet grader frame	1	-
18	Steam generator	1	90
19	Granulator control panel	2	-
20	Equipment control panel	4	-
21	Electrically driven gate	1	0,75
22	Settler frame	1	-



Technological scheme of granulating plant, 6 tons/hour capacity

Pos.	Item	Quantity	Capacity kW
1	Crusher	2	31,1x2
2	Screw transporter	2	2,2x2
3	Bunker with agitator		
4	Granulator with dosing unit and matrix d-8mm	4	(110+2,2+0,75)x4
5	Chain-belt conveyor L=4m	2	0,37
6	Bucket chain H3-10/7	1	2,2
7	Cooling tower	1	2
8	Pellet grader Q=6 t/h	1	2,2
9	Bucket chain H3-10/6	1	2,2
10	Finished product bunker	1	-
11	Big bag frame	1	-
12	Electronic weighing machine 3t	1	-
13	Screw transporter T-403/L=2m	1	2,2
14	Settler	1	-
15	Ventilator	1	11
16	Column and pellet grader frame	1	-
17	Steam generator	2	90x2
18	Screw transporter T-403 L=8m	1	2,2
19	Granulator control panel	4	-
20	Equipment control panel	4	-