

GOOD PRACTICE EXAMPLE

Alfa Wood Pindos



1. General description of selected process or SCORPS

ALFA WOOD PINDOS is located in the Community of Mavranei, 7 km from the city of Grevena, in a privately owned site covering 107.000 m². On these grounds, there is a 26.054.89 m² building which houses the administration offices and the company's production facilities.

The major suppliers of Alfa Wood are wholesalers trading forest timber and the local Rural Forest Cooperatives, which both transport products to the premises of the plant.

The round wood that is delivered by trucks to the company should have a size of 2 m length and 50 cm diameter. The round wood is stored at the yard of the plant. The logs are cut to a more manageable length (if over 2 m of length or over 50 cm of diameter), debarked and then sent to the chippers. If necessary, the round wood is washed to remove dirt and other debris. Wood chips of a size of 4x4 cm are produced. The produced wood chips designed for the production process are stored in a silo and the wood waste (bark etc.) for thermal utilization in another.

The general steps used to produce MDF (Middle Density Fiber board) include mechanical pulping of wood chips to fibers (refining), drying and blending the fibers, in order to transform the material to mat MDF. Then the material is hot pressed, cooled, trimmed, sanded and prepared for shipping.



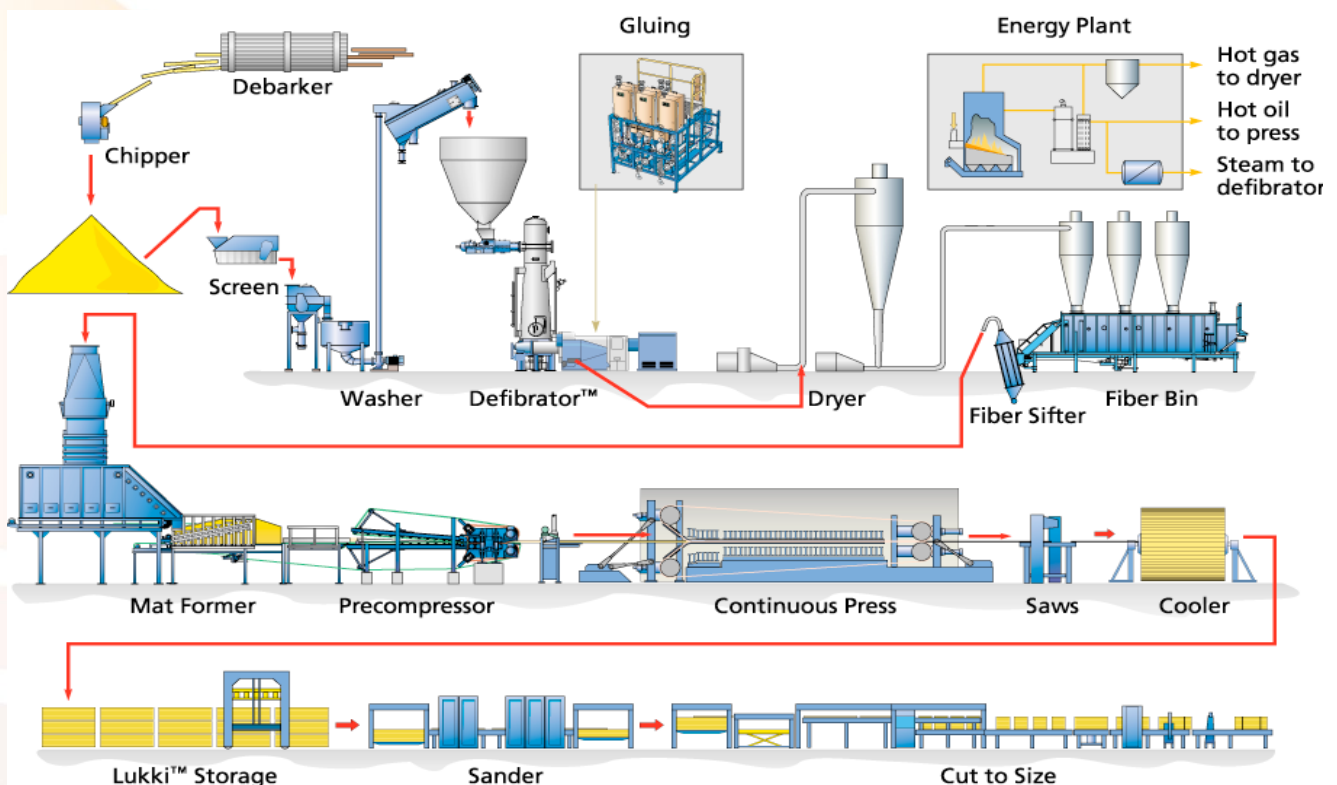
2. Why this process or SCORP was selected

The reasons are as follows:

- Existence of unit of environmental management and energetic use of woody byproducts
- Reduction of production costs
- Reduction of drying costs
- Recycling of waste
- Use of biomass for heat and energy generation
- System of electrical monitoring of energy control

3. Who is involved in this process or SCORP?

- transportation company
- wood processing company



4. Technical description

ALFA WOOD PINDOS S.A. – General overview

ALFA WOOD PINDOS officially starts the production of MDF (Middle Density Fiber board) and veneered MDF in April 2006.

Today, it produces 6 groups of products:

- MDF (raw)
- Veneered MDF
- Sanded MDF
- Laminate flooring (clipped)
- Lacquered MDF
- Melamine

After having invested in the increase of productivity, an investment that was completed by the beginning of 2009, the unit is able to produce 120.000 m³ of raw MDF per year. With full modernization and the addition of 4 new production lines, the quantity of raw MDF produced, can be used to the production of:

- Veneered MDF
- Sanded MDF
- Lacquered MDF
- Clicked Laminate Floor

Energetic use of biomass

- The factory is processing 150.000 tn of round wood annually for its MDF production.
- 15.000 tn of waste/byproducts are produced and combusted which equals to 4.500 tonnes of petrol.

Installation for heat generation

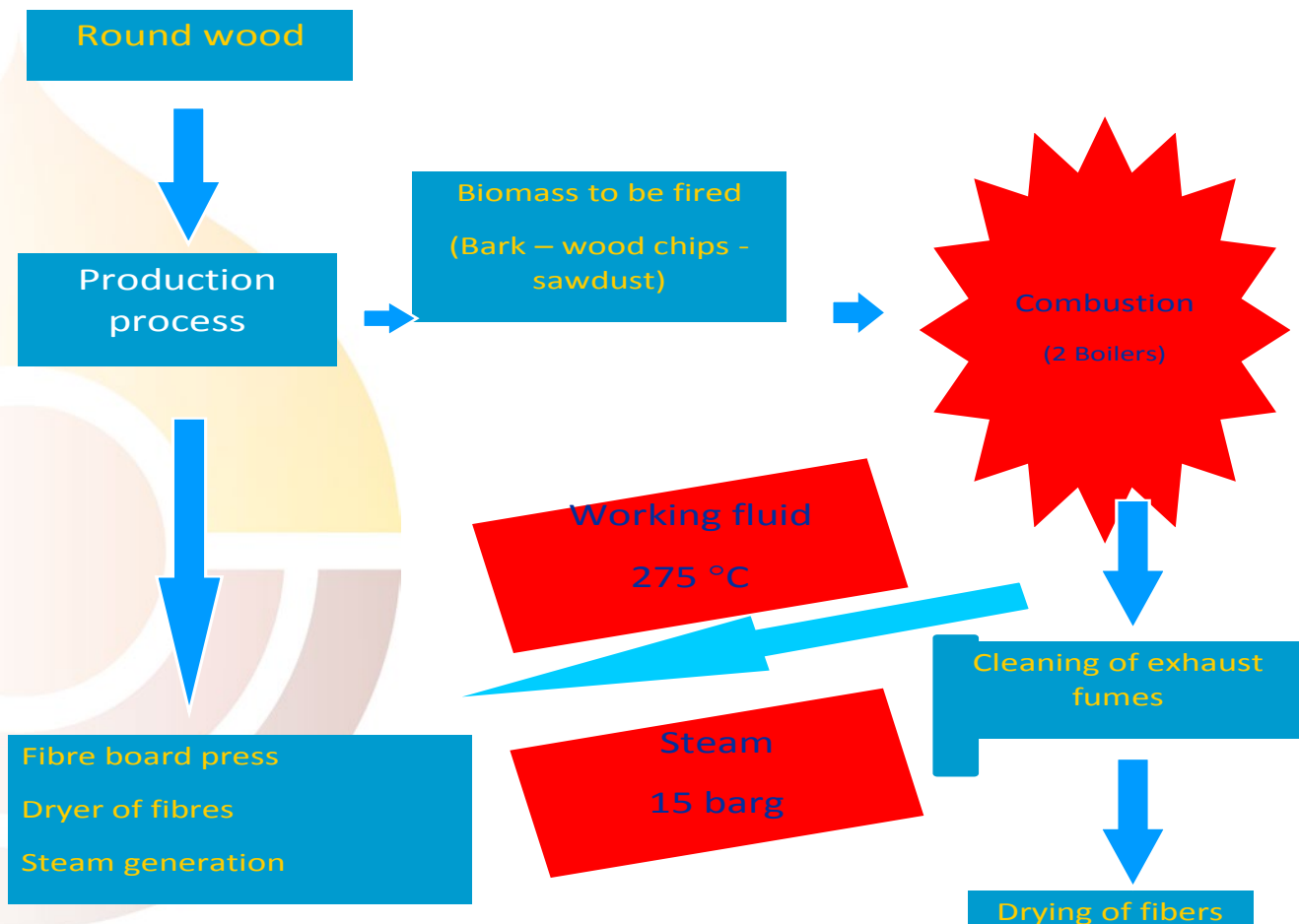
- The installation is designed for the production of 11.500.000 kcal/hr in an ORC (Organic Rankin Cycle) boiler with output temperature of 275 oC and a mean humidity of the fuel equal to 35% as received.
- The fuel is bark and wood chips (up to 50cm of length).
- 2 boilers of 7,5 MWth & 8,7 MWth.
- 1 heat exchanger (working fluid – steam), steam generation 12 tn/hr, at 16 bar pressure.
- Economizer (exhaust fumes).
- 60.000 m³/hr of exhaust fumes at a temperature of 245 oC is going through a series of fabric filters (bag houses) to the drying of the fibers.
- Total yield of installation: ~ 95%.

5. Economical information's

Maintenance: 4 hr/week

Investment cost: 2300 €/kWel

Maintenance cost: 0.007 €/kWel



6. Environmental aspects

4.500 tonnes of petrol are saved which equals to 14.170.500 kg CO₂ (petrol 3149 kg CO₂e per tonne).

7. Socio-economic aspects

In the last 2 years no new vacancies were created.

