FORPA
Biomass to the Masses

SOUTH EAST EUROPE
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GOOD PRACTICE EXAMPLE

Alfa Wood Nevrokopi

CPERI
Chemical Process and Energy Resources Institute

1. General description of selected process or SCORPS

Alfa Wood Nevrokopi is the largest pellet manufacturer in Greece and one of the largest in the Balkans. It is producing pellets in considerable amounts for domestic consumption and for some industrial applications.

The major raw material for pellet production is round wood either coming from local producers or imported from the neighbouring countries (mainly Bulgaria, at a share of 40-50%).

In Greece, wood residues are used unprocessed, as they leave the industrial operation. These materials are often used in boilers directly by the producing company or by companies near the production site. Often these wood residues are disposed of for free to companies which have the possibility of thermal exploitation (such as Alfa Wood Nevrokopi). The residues are mainly comprised of bark and sawdust or shavings, which cannot be utilized in the production process of the pellets, due to the high ash content.

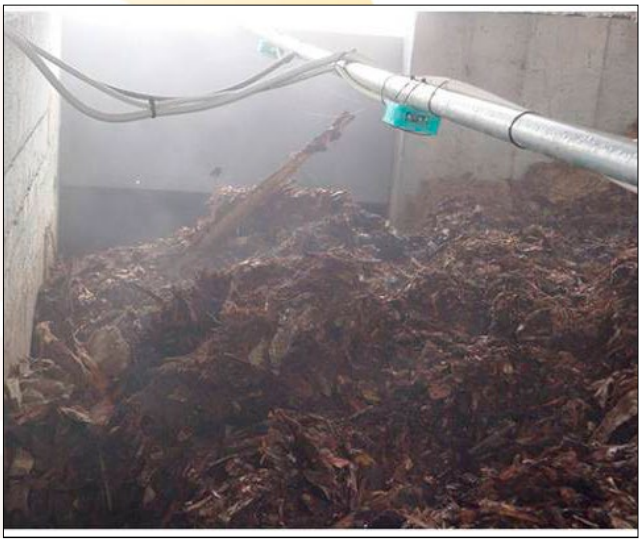
2. Why this process or SCORP was selected

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 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 Nevrokopi

ALFA WOOD Nevrokopi officially starts the production of pellets in 2009.

Energetic use of biomass

- Nominal output: 8tn/hr pellets (300 days/year)
- Input: 20tn/hr of biomass (for pellets production and heat generation)
- Biomass utilization (bark, sawdust etc.): 4tn/hr for drying and space heating (winter)

Installation

- The installation is designed for the production of 2.000.000 kcal/hr in an ORC (Organic Rankin Cycle boiler with output temperature of 275 oC and mean humidity of fuel equal to 35% as received, for heating purposes of the factory)
- A boiler of 7.5 MWth is used
- Raw material used: bark, sawdust, shavings etc. from the adjacent wood processing factories
- No quality control is being performed on the wood residues/ raw material

5. Economical information's

For the thermal exploitation of wood residues the company invested € 3 Mio.

6. Environmental aspects (CO_2 savings, …)

4tn/hr of biomass (bark, sawdust, etc.) is used for drying of pellet's raw material and space heating (winter)

7. Socio-economic aspects

Thirty- five job opportunities have been created during the last years in ALFA WOOD Nevrokopi, which has contributed to the local economic development despite the Greek financial crisis.