

The development of Circulate Processing System for the Wood Disposal (CIPSWOOD) and its possibility

- Basic study of Recycling Industrial Scheme for the Wood Disposal (RISWOOD)-

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The development of a Recycling Industrial Scheme for the Wood Disposal (RISWOOD) using a Circulate Processing System for the Wood Disposal (CIPSWOOD) as its core technique, is a converting method for Wood disposal into charcoal, wood vinegar and biomass energy by pyrolysis as an alternative to burning. The following issues and experiments were studied and investigated:

(1) Basic planning for the CIPSWOOD.

1. Process planning
2. Planning of production facilities and analysis of standard cost
3. Energy calculation

(2) Economical analysis of the processing system for wood disposal using CIPSWOOD.

(3) Basic experiments and analysis to measure the efficiency of the CIPSWOOD .

1) Measuring the production ratio of pyrolyligneous products for the process of wood disposal:

1. Water content ratio of wood raw materials
2. Pyrolyligneous products ratio of wood disposal materials with hard bark
3. Pyrolyligneous products ratio of normal wood materials
4. Production ratio of pyrolyligneous liquid (wood vinegar and wood tar/pitch)

2) Carbon fixed ratio and retaining carbon ratio of wood pyrolyligneous products

(4) Experiments and analysis for efficacy of utility for agricultural product to use wood pyrolyligneous products produced with CIPSWOOD:

1. Rice production
2. White cabbage production
3. Radish production

(5) Feasibility analysis for efficient utility of wood pyrolyligneous products produced with CIPSWOOD (investigation by questionnaire of local farmers).

(6) Feasibility study for RISWOOD (investigation by questionnaire of local government officers).

(7) Basic planning model of RISWOOD

At the final chapter, using these results of above studies as the basic knowledge, the developing trend(targets) and possibility are explained clearly as "The effects and issues at the future developments of RISWOOD".