



HTC of biomass

Ingelia, a company dedicated to the commercialization of biomass and organic residues, has developed an HTC technology plant at industrial scale. The plant was built in 2010 in Valencia and is able to process organic residues in continuous operation mode, therefore demonstrating the feasibility of this technology. In 2015, a second reactor was installed.

The technology allows on the one hand to concentrate the heating value of the input biomass on a solid biofuel (around 24 MJ/kg), and on the other hand, to produce a fertilized water. The input material can be almost any type of wet organic residue (for instance the organic fraction of the urban residues, sewage sludge, agro-forestry residues or agri-food residues, pruning, etc.).

During the hydrothermal carbonization process, the wet biomass is carbonized into biocoal. The product is then refined (removing impurities such as metals, stones, glass, etc.) and dried. Finally, a powered biocoal can then undergo a pelletizing or briquetting. The process also allows to extract biochemical compounds from some biomasses /residues.

The reactors are modular, with a processing capacity between 5000 and 10000 t/year per reactor and the number of reactors can be adapted according to the project needs.

The biocoal obtained has many advantages starting with a competitive market price, homogeneity regardless of the biomass introduced in the process and an increased heating value of around 30 % when compared to conventional pellets. The produced biocoal is also hydrophobic, as well as easy to transport and store. It is therefore a renewable product that can substitute fossil-based coal in different applications (thermal, metallurgy, etc.) while contributing to decrease GHG emissions. The liquid fraction produced can be used for irrigation purposes (parks, gardening or agriculture).



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COUNTRY

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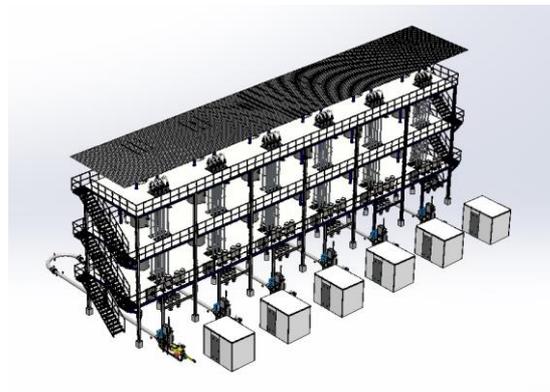
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ABOUT BRANCHES

BRANCHES is a H2020 “Coordination Support Action” project, that brings together 12 partners from 5 different countries. The overall objective of **BRANCHES** is to foster knowledge transfer and innovation in rural areas (agriculture and forestry), enhancing the viability and competitiveness of biomass supply chains and promoting innovative technologies, rural bioeconomy solutions and sustainable agricultural and forest management.



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THE PARTNERSHIP

