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“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

Los Residuos Agrícolas y Cañeros como Alternativa Energética del Presente y del Futuro

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Abstract

This work presents biomasses uniaxial deformation experiments in a cylindrical matrix, and mathematical models of the biomasses physical behaviour are obtained.

These models were very useful in the design of hydraulic briquettes- molders.

The results in the production of tubular are relevant. Thus, the technical and economical standards of these briquettes are equal or superior to those appearing in the specialized literature for the technology in question.

The higher effectiveness of the tubular briquettes over the solid ones has been demonstrated theoretically and practically in the cases of thermochemical processes and transformation of biomasses. This is feasible for biomasses coming from not wooden waste, and which geometrical dimensions have been conveniently modified.

It is important to highlight the sources and conditions of the waste used. It is obtained mainly as a result of the agricultural processes and the sugar cane industry. This waste is often found in the harvest fields or recollection centres at a humidity between 12-20%. The levels of humidity cannot be easily reduced, since there are serious difficulties to create the technical and technological infrastructure that the improvement of these conditions requires. Because of the briquettes- molder adaptability and mobility, the hydraulic densification technology is the most viable alternative to address the above stated problem. They can be taken to the diverse places where the biomasses are located.
