

HIGH TEMPERATURE BIOTHERMAL TREATMENT OF WOOD

UQAT – 002
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ALIGO
I N N O V A T I O N

Partner institution :

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BACKGROUND

Many companies use wood as raw material for the fabrication of their commercialised products and are, therefore, continuously looking for wood of high quality.

TECHNOLOGY

A new process of heat treatment using bioesters commonly called biodiesel as heat vector to dry and treat wood. Bioesters are obtained by transesterification of fatty acids contained in virgin and used vegetal oils and animal fat. The heat treatment consists on immersing the wood in a bioesters bath that is heated from 150°C to 230°C for a determined period of time, depending on the size and the type of the wood.

COMPETITIVE ADVANTAGES

- Green and non-expensive technology.
- Recycling of biomass residues such as used vegetal oils and animal fats.
- Fast wood drying and treating.
- Low viscosity of the heat carrier (bioesters), deep penetration into the wood cells.
- Environmentally friendly and biodegradable heat carrier (bioesters)
- High heat transfer.
- Absence of oxygen, less deterioration of the wood.
- High thermal stability of the heat carrier. Can be recycled many times.

- The heat carrier is not hydrolysable.
- Recovering of wood extractives.
- High performance of the treated wood: improved resistant to the attack of microorganisms.
- Improved dimensional stability.
- Increased life span and colour stability.
- Compatibility with finishing products (varnish, glue, polish).
- Easy to process, no dust can be evolved.

APPLICATIONS

To simultaneously dry and treat several wood species such as fir, aspen and spruce.

TECHNOLOGY DEVELOPMENTAL STAGE

The technology is currently under advanced technologic maturation stage.

PATENT STATUS

Patent utility for the USA and Canada (pending).

BUSINESS OPPORTUNITY

Looking for strategic partnership in the following fields: furniture and outer accessories, decking, flooring, windows and doors, and building materials.

For Information please contact:

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