

Title (en)
METHOD FOR IMPROVING THE EFFICIENCY OF CHEMICAL PULPING PROCESSES BY PRETREATING WOOD OR PULPWOOD WITH WHITE ROT FUNGI

Title (de)
VERFAHREN ZUR VERBESSERUNG DER EFFIZIENZ VON CHEMISCHEN KOCHVERFAHREN DURCH VORBEHANDLUNG DES HOLZES MIT WEISSFAULEPILZEN

Title (fr)
PROCEDE AMELIORANT L'EFFICACITE DES PROCESSUS CHIMIQUES DE REDUCTION EN PATE PAR PRE-TRAITEMENT DU BOIS OU DES FIBRES AVEC DES POURRITURES BLANCHES

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Priority

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Abstract (en)
[origin: WO9713025A1] The present invention relates to the use of certain Basidiomycete fungi, in particular, white rot fungi, such as *Phlebia tremellosa*, *Trichaptum biforme*, *Schizophyllum commune*, and *Phanerochaete gigantea*, in preconditioning wood or pulpwood to yield a more uniform and more efficient process resulting in a higher quality product. Such treatment has been found also to increase the porosity of wood substrates, including particularly non-sterilized wood substrates. Such increases in porosity are accompanied by improved liquor penetration into the cells of the more porous wood or pulpwood in a subsequent chemical treatment process. Despite the fact that select white-rot fungi may deeply penetrate and leave voids where pitch and/or resin has been removed, or the cell wall has been modified, it has been found that such voids may have substantially no effect on the lignin content in the pulp or pulpwood. Nevertheless, the resulting fungally-treated pulp, when thereafter subjected to chemical treatment, demonstrates increased brightness, increased yield and concomitant reduction in Kappa number, without significant decreases in viscosity. The invention also relates to a method for reducing the electrical energy consumption during the mechanical refining of wood or timber into pulp comprising inoculating at least one end of the wood or timber with a pitch reducing effective amount of a least one fungus selected from the group mentioned above and allowing the fungus to grow on and into the wood or timber for a time sufficient to reduce the pitch in the wood or timber, and then subjecting the thus treated wood or timber to mechanical refining.

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