

Title (en)
STEAM PRE-HEATING IN ORIENTED STRAND BOARD PRODUCTION

Title (de)
DAMPFVORHEIZUNG BEI DER HERSTELLUNG VON PLATTEN AUS ORIENTIERTEN FASERN

Title (fr)
PRECHAUFFAGE A LA VAPEUR DANS LA FABRICATION DE PANNEAUX A COPEAUX ORIENTES

Publication
EP 1030766 A1 20000830 (EN)

Application
EP 98958486 A 19981109

Priority

- US 9823699 W 19981109
- US 96894697 A 19971112
- US 7896298 A 19980514

Abstract (en)
[origin: WO9924233A1] Oriented strand board (10) is produced using a continuous belt press (22) and using an isocyanate binder with steam exposure of the mat (18) of wood material prior to entry into the press. The steam exposure provides moisture which softens wood fibers and enhances lignin flow in the mat. In addition, the moisture reacts with isocyanate binder to produce polyureas from the isocyanate binder (e.g. the preferred binder is pMDI); thereby reducing the cure conditions (i.e. temperature, pressure and time) required for the press to fuse the mat and binder together. The isocyanate binder also reacts with hydroxyl groups in the cellulose and hemicellulose strands of the wood material to allow both chemical and physical bonds to be created with the wood material. The oriented strand board exiting the press has a higher moisture content and more resistant thickness swell under humid conditions.

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IPC 8 full level
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