

Title (en)

Process for densifying low density woods.

Title (de)

Verfahren zur Verdichtung von Hölzern mit niedriger Dichte.

Title (fr)

Procédé pour densifier des bois de basse densité.

Publication

EP 0197674 A1 19861015 (EN)

Application

EP 86301862 A 19860314

Priority

CA 476650 A 19850315

Abstract (en)

Low quality, low density woods are densified to form wood products having the characteristics of high quality natural hardwoods. A green solid wood member having a high moisture content is impregnated with anhydrous ammonia to plasticize the wood into a sponge-like form saturated with water and ammonia. This plasticized wood member is placed between press plates of a cyclic press and, while maintaining the temperature of the wood below 100 DEG C, it is subjected to a plurality of low pressure compression cycles each of about 1/2 to 1 minute duration with the wood being compressed to a predetermined thickness of up to 50% less than its original thickness. It is held at the reduced thickness for a short time and released during each cycle, whereby water and ammonia are squeezed out of the wood down to a moisture content of less than about 30%. The damp wood member of reduced thickness thus obtained is then dried to obtain a kiln dried, densified solid wood product. This method may be used to densify wood planks, pre-glued laminates and thin veneers. For veneers, a simpler pressing system and higher temperatures may be used.

IPC 1-7

B27K 5/00; **B27K 5/06**; **B27M 1/02**

IPC 8 full level

B27K 5/00 (2006.01); **B27K 5/06** (2006.01); **B27M 1/02** (2006.01)

CPC (source: EP)

B27K 1/00 (2013.01); **B27K 3/20** (2013.01); **B27K 5/06** (2013.01); **B27M 1/02** (2013.01)

Citation (search report)

- [X] AT 326339 B 19751210 - INST KHIM DREVESINY AKADEMII N [SU], et al
- [A] GB 1261686 A 19720126 - NESTE OY [FI]
- [AD] US 3282313 A 19661101 - CONRAD SCHUERCH

Cited by

FR2658750A1; CZ304024B6; EP0623433A1; JPWO2018003935A1; FR2796586A1; WO2018003935A1; WO9319911A1; WO9319910A1; WO2011136728A1

Designated contracting state (EPC)

AT DE FR GB IT NL SE

DOCDB simple family (publication)

EP 0197674 A1 19861015; **EP 0197674 B1 19900523**; AT E52958 T1 19900615; CA 1236255 A 19880510; DE 3671403 D1 19900628

DOCDB simple family (application)

EP 86301862 A 19860314; AT 86301862 T 19860314; CA 476650 A 19850315; DE 3671403 T 19860314