

**CPC****COOPERATIVE PATENT CLASSIFICATION****B27K**

**PROCESSES, APPARATUS OR SELECTION OF SUBSTANCES FOR IMPREGNATING, STAINING, DYEING, BLEACHING OF WOOD OR SIMILAR MATERIALS, OR TREATING OF WOOD OR SIMILAR MATERIALS WITH PERMEANT LIQUIDS, NOT OTHERWISE PROVIDED FOR** ([applying liquids or other fluent materials to surfaces in general B05](#); [coating wood or similar material B44D](#)); **CHEMICAL OR PHYSICAL TREATMENT OF CORK, CANE, REED, STRAW OR SIMILAR MATERIALS**

**B27K 1/00****Damping wood**

## B27K 1/02

. Apparatus

**B27K 3/00**

**Impregnating wood, {e.g. impregnation pretreatment, for example puncturing; Wood impregnation aids not directly involved in the impregnation process}** ([dyeing, staining B27K 5/00](#))

## B27K 3/002

. {employing compositions comprising micro-organisms}

## B27K 3/005

. {employing compositions comprising microparticles}

## B27K 3/007

. {employing compositions comprising nanoparticles}

## B27K 3/02

. Processes; Apparatus

## B27K 3/0207

.. {Pretreatment of wood before impregnation}

## B27K 3/0214

... {Drying ([drying in general F26B](#))}

## B27K 3/0221

... {Pore opening ([B27K 3/0214](#) takes precedence)}

## B27K 3/0228

.. {Spraying apparatus, e.g. tunnels}

## B27K 3/0235

.. {Stationary devices on or in legs or poles}

## B27K 3/0242

.. {using melt impregnation}

## B27K 3/025

.. {Controlling the process}

## B27K 3/0257

.. {using rods or tablets, or ampoules, e.g. inserted in pre-drilled cavities}

## B27K 3/0264

.. {using staples or nails}

## B27K 3/0271

.. {Vapour phase impregnation}

## B27K 3/0278

.. {involving an additional treatment during or after impregnation}

## B27K 3/0285

... {for improving the penetration of the impregnating fluid}

## B27K 3/0292

... {for improving fixation ([B27K 3/0285](#) takes precedence)}

## B27K 3/04

.. Impregnating in open tanks

## B27K 3/06

.. Sap stream methods

## B27K 3/08

.. Impregnating by pressure, {e.g. vacuum impregnation}

## B27K 3/083

... {along the fibers, i.e. longitudinal impregnation}

## B27K 3/086

... {using supercritical or high pressure fluids}

## B27K 3/10

... Apparatus

## B27K 3/105

.... {Injection apparatus}

## B27K 3/12

.. Impregnating by coating the surface of the wood with an impregnating paste

- B27K 3/14 .. Bandage methods
- B27K 3/15 .. Impregnating involving polymerisation { including use of polymer-containing impregnating agents (macromolecular compounds derived from lignocellulosic materials [C08H](#); compositions of lignin-containing materials [C08L 97/02](#))}

**NOTE**

1. When classifying in group [B27K 3/15](#), classification is additionally made in the groups of subclass [M08L](#) for defining the chemical polymeric structure
2. In groups [B27K 3/16](#) to [B27K 3/50](#), in the absence of an indication to the contrary, impregnating agents are classified in the last appropriate place

- B27K 3/153 ... {Without in-situ polymerisation, condensation, or cross-linking reactions}
- B27K 3/156 ... {Combined with grafting onto wood fibres}
- B27K 3/16 . Inorganic impregnating agents
  - B27K 3/163 .. {Compounds of boron}
  - B27K 3/166 .. {Compounds of phosphorus}
  - B27K 3/18 .. Compounds of alkaline earth metals
  - B27K 3/20 .. Compounds of alkali metals or ammonium
  - B27K 3/22 .. Compounds of zinc or copper
  - B27K 3/24 .. Compounds of mercury
  - B27K 3/26 .. Compounds of iron, aluminium, or chromium
  - B27K 3/28 .. Compounds of arsenic or antimony
  - B27K 3/30 .. Compounds of fluorine
  - B27K 3/32 .. Mixtures of different inorganic impregnating agents
- B27K 3/34 . Organic impregnating agents {(polymers [B27K 3/15](#))}
- B27K 3/343 .. {Heterocyclic compounds}
- B27K 3/346 .. {Grafting onto wood fibres ([B27K 3/156](#) takes precedence; macromolecular compounds derived from lignocellulosic materials [C08H](#))}
- B27K 3/36 .. Aliphatic compounds
- B27K 3/38 .. Aromatic compounds {([B27K 3/343](#) takes precedence)}
- B27K 3/40 ... halogenated
- B27K 3/42 ... nitrated, or nitrated and halogenated
- B27K 3/44 .. Tar; Mineral oil
- B27K 3/46 ... Coal tar
- B27K 3/48 ... Mineral oil
- B27K 3/50 .. Mixtures of different organic impregnating agents
- B27K 3/52 . Impregnating agents containing mixtures of inorganic and organic compounds

**B27K 5/00 Treating of wood not provided for in groups [B27K 1/00](#), [B27K 3/00](#)**

- B27K 5/0005 . {Cryogenic treatment}
- B27K 5/001 . {Heating}
- B27K 5/0015 . {by electric means}

- B27K 5/002 .. {Electric discharges, plasma}
- B27K 5/0025 . {by magnetic fields}
- B27K 5/003 . {by using electromagnetic radiation or mechanical waves (infra-red heating of wood [B27K 5/001](#))}
- B27K 5/0035 .. {Electron beam-radiation}
- B27K 5/004 .. {Gamma-radiation}
- B27K 5/0045 .. {X-rays}
- B27K 5/005 .. {Laser-light}
- B27K 5/0055 .. {Radio-waves, e.g. microwaves}
- B27K 5/006 .. {Vibrations}
- B27K 5/0065 .. {Ultrasonic treatment}
- B27K 5/007 . {using pressure ([B27K 3/08](#) takes precedence)}
- B27K 5/0075 .. {Vacuum}
- B27K 5/008 .. {Supercritical or high pressure fluids}
- B27K 5/0085 . {Thermal treatments, i.e. involving chemical modification of wood at temperatures well over 100°C}
- B27K 5/009 .. {using a well-defined temperature schedule}
- B27K 5/0095 . {by employing wrappers}
- B27K 5/02 . Staining or dyeing wood {(wood staining compositions [C09D 15/00](#))}; Bleaching wood (bleaching wood pulp [D21C 9/10](#))
- B27K 5/04 . Combined bleaching or impregnating and drying of wood
- B27K 5/06 . Softening or hardening of wood
- B27K 5/065 .. {Hardening}

**B27K 7/00** Chemical or physical treatment of cork (mechanical working of cork [B27J 5/00](#))

**B27K 9/00** Chemical or physical treatment of reed, straw, or similar material (mechanical working of cane or the like [B27J 1/00](#))

- B27K 9/002 . {Cane, bamboo}
- B27K 9/005 . {Reed}
- B27K 9/007 . {Straw}

**B27K 2200/00** Wooden materials to be treated

- B27K 2200/10 . Articles made of particles or fibres consisting of wood or other lignocellulosic material (wood composite materials made of particles or fibres [B27N](#))
- B27K 2200/15 . Pretreated particles or fibres
- B27K 2200/30 . Multilayer articles comprising wood (multilayered products [B32B](#))

**B27K 2240/00** Purpose of the treatment

- B27K 2240/10 . Extraction of components naturally occurring in wood, cork, straw, cane or reed (solvent extraction [B01D 11/00](#))
- B27K 2240/15 . Decontamination of previously treated wood (decontamination in general [A62D 3/00](#))
- B27K 2240/20 . Removing fungi, molds or insects (biocidal compositions [A01N](#); sterilization or disinfection of wood [A61L](#))

- B27K 2240/30 . Fireproofing ([fireproofing materials in general C09K 21/00](#))
- B27K 2240/50 . Ageing
- B27K 2240/60 . Improving the heat-storage capacity
- B27K 2240/70 . Hydrophobation treatment
- B27K 2240/90 . UV-protection