

**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**

**Guidance heading:****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

<b>B27K 5/00</b>	<b>Treating of wood not provided for in groups <a href="#">B27K 1/00</a>, <a href="#">B27K 3/00</a></b>
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 <a href="#">B27K 5/001</a> ) }
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 ( <a href="#">B27K 3/08</a> 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 <a href="#">C09D 15/00</a> ) }; Bleaching wood (bleaching wood pulp <a href="#">D21C 9/10</a> )
B27K 5/04	. Combined bleaching or impregnating and drying of wood
B27K 5/06	. Softening or hardening of wood
B27K 5/065	.. { Hardening }
<b>B27K 7/00</b>	<b>Chemical or physical treatment of cork (mechanical working of cork <a href="#">B27J 5/00</a>)</b>
<b>B27K 9/00</b>	<b>Chemical or physical treatment of reed, straw, or similar material (mechanical working of cane or the like <a href="#">B27J 1/00</a>)</b>
B27K 9/002	. { Cane, bamboo }
B27K 9/005	. { Reed }

B27K 9/007 . { Straw }

**Guidance heading:**

**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](#) )

**Guidance heading:**

**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