

**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](#))}

#### NOTES

1. When classifying in group [B27K 3/15](#), classification is additionally made in the groups of subclass [C08L](#) 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	<ul style="list-style-type: none"> <li>• {by electric means}</li> </ul>
B27K 5/002	<ul style="list-style-type: none"> <li>• • {Electric discharges, plasma}</li> </ul>
B27K 5/0025	<ul style="list-style-type: none"> <li>• {by magnetic fields}</li> </ul>
B27K 5/003	<ul style="list-style-type: none"> <li>• {by using electromagnetic radiation or mechanical waves (infra-red heating of wood <a href="#">B27K 5/001</a>)}</li> </ul>
B27K 5/0035	<ul style="list-style-type: none"> <li>• • {Electron beam-radiation}</li> </ul>
B27K 5/004	<ul style="list-style-type: none"> <li>• • {Gamma-radiation}</li> </ul>
B27K 5/0045	<ul style="list-style-type: none"> <li>• • {X-rays}</li> </ul>
B27K 5/005	<ul style="list-style-type: none"> <li>• • {Laser-light}</li> </ul>
B27K 5/0055	<ul style="list-style-type: none"> <li>• • {Radio-waves, e.g. microwaves}</li> </ul>
B27K 5/006	<ul style="list-style-type: none"> <li>• • {Vibrations}</li> </ul>
B27K 5/0065	<ul style="list-style-type: none"> <li>• • {Ultrasonic treatment}</li> </ul>
B27K 5/007	<ul style="list-style-type: none"> <li>• {using pressure (<a href="#">B27K 3/08</a> takes precedence)}</li> </ul>
B27K 5/0075	<ul style="list-style-type: none"> <li>• • {Vacuum}</li> </ul>
B27K 5/008	<ul style="list-style-type: none"> <li>• • {Supercritical or high pressure fluids}</li> </ul>
B27K 5/0085	<ul style="list-style-type: none"> <li>• {Thermal treatments, i.e. involving chemical modification of wood at temperatures well over 100°C}</li> </ul>
B27K 5/009	<ul style="list-style-type: none"> <li>• • {using a well-defined temperature schedule}</li> </ul>
B27K 5/0095	<ul style="list-style-type: none"> <li>• {by employing wrappers}</li> </ul>
B27K 5/02	<ul style="list-style-type: none"> <li>• Staining or dyeing wood {(wood staining compositions <a href="#">C09D 15/00</a>); Bleaching wood (bleaching wood pulp <a href="#">D21C 9/10</a>)}</li> </ul>
B27K 5/04	<ul style="list-style-type: none"> <li>• Combined bleaching or impregnating and drying of wood</li> </ul>
B27K 5/06	<ul style="list-style-type: none"> <li>• Softening or hardening of wood</li> </ul>
B27K 5/065	<ul style="list-style-type: none"> <li>• • {Hardening}</li> </ul>
<b>B27K 7/00</b>	<b>Chemical or physical treatment of cork</b> (mechanical working of cork <a href="#">B27J 5/00</a> )
<b>B27K 9/00</b>	<b>Chemical or physical treatment of reed, straw, or similar material</b> (mechanical working of cane or the like <a href="#">B27J 1/00</a> )
B27K 9/002	<ul style="list-style-type: none"> <li>• {Cane, bamboo}</li> </ul>
B27K 9/005	<ul style="list-style-type: none"> <li>• {Reed}</li> </ul>
B27K 9/007	<ul style="list-style-type: none"> <li>• {Straw}</li> </ul>
<b>B27K 2200/00</b>	<b>Wooden materials to be treated</b>
B27K 2200/10	<ul style="list-style-type: none"> <li>• Articles made of particles or fibres consisting of wood or other lignocellulosic material (wood composite materials made of particles or fibres <a href="#">B27N</a>)</li> </ul>
B27K 2200/15	<ul style="list-style-type: none"> <li>• Pretreated particles or fibres</li> </ul>
B27K 2200/30	<ul style="list-style-type: none"> <li>• Multilayer articles comprising wood (multilayered products <a href="#">B32B</a>)</li> </ul>
<b>B27K 2240/00</b>	<b>Purpose of the treatment</b>
B27K 2240/10	<ul style="list-style-type: none"> <li>• Extraction of components naturally occurring in wood, cork, straw, cane or reed (solvent extraction <a href="#">B01D 11/00</a>)</li> </ul>
B27K 2240/15	<ul style="list-style-type: none"> <li>• Decontamination of previously treated wood (decontamination in general <a href="#">A62D 3/00</a>)</li> </ul>

- 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