

PERFECTION OF TECHNOLOGY OF DRYING OF WOOD BURL

V. Koval, candidate of engineering sciences

Burl this of high quality formation on a barrel as dropwise growth. Valued from the beauty. Used in industry in a kind lead, and also for the production of shallow wares of type of small boxes, woman decorations, finishing of handles of knives, lodges of guns, and also valued woodcarver .

Drying of wood капа becomes complicated that except the increase of closeness of this wood, at separated burl from the barrel of tree appears butt-end surface with the longitudinal corn-floor of moisture. It is analytically shown that in such sortiments intensity of moving of moisture does not depend on the form of transversal cut of sortiment, but is a function to the square of distance from a butt end, to the coefficient of conductivity of moisture wood along fibres and duration of process of drying. It explains the increase of overfalls of humidity and increase of tensions in the superficial zone of butt end, and dangers of the superficial spalling of wood. Drying of purveyances is considerably simplified comparatively with massive капами. Between that, every cut of purveyance shows a soba a butt-end surface, on that in the process of drying arise up crack that induces to apply the soft modes of drying.

For research the осцилюючі modes of drying were chosen. Features of this method are that thermal energy is passed to material periodically. Drying is conducted by cycles that include two stages - heating and cooling. The analysis of the physical phenomena, is conducted that take place in the process of drying of wood the pulse modes. Set presence of motion of moisture to the surface in the stage of "cooling" under the action of gradient of temperature and her moistening.

Parameters are calculated and the pulse modes of the convective and combined with energy of ultrahigh frequency process of drying of preparations of burl wood are made.

Use in a stage of heating of an enerigiya of ultrahigh frequency allows to reduce duration of drying and power consumption.