

THE USE OF ELECTROMAGNETIC ENERGY FOR WOOL DRYING

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Питання сушіння вовни розглядається за допомогою електромагнітної енергії надвисокого діапазону частот.

The technical level of the equipment installed at the primary wool processing factories does not meet modern requirements, and the machine-building industry of Ukraine does not produce machines and equipment for this industry. In Russia, Poland, Belgium and other countries, which are the main suppliers of equipment for wool primary processing factories, the scientific and technical potential is focused mainly on the creation of equipment for traditional technologies.

Taking into account the physical and chemical properties of wool, it can be assumed that in the field of primary processing of wool, reducing the cost of production and obtaining high profits is possible only on the basis of new technologies and equipment with the use of elastic vibrations and electromagnetic fields.

The new technological concept of the primary processing of wool is based on the conclusion about the information and energy influence of physical fields of electromagnetic and acoustic nature on the physical and chemical properties of wool, its pollution, grease and wash water.

The use of microwave energy of an electromagnetic field for washed wool drying and dirty wool processing is associated with the unique features of microwave energy.

The efficiency of washing, the quantity and quality of wool fat, the strength properties of wool and the repeated use of washing water depend on the choice of frequency, power and exposure of the electromagnetic field.

The development and implementation of a fundamentally new technology and equipment for the primary processing of wool will significantly reduce the cost of washing and drying of 1 kg of wool and ensure the competitiveness of products made from wool fibers in the domestic and world markets.

However, the use of microwave energy for wool drying and wool processing is associated with significant difficulties, both theoretical and constructive, and requires the concentration of high scientific potential and specialized production.