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RESEARCH ON THE TECHNOLOGY OF MAKING MACHINE-DIALED AND LOW-GRADE COTTON PROCESSING

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ANNOTATION

We will discuss the presence of large and small impurities as well as mineral (mineral) additives in cotton, the cross- and general appearance schemes of equipment 1XK, the effectiveness of cleaning cotton from impurities, the method of affecting the Cotton of machine working bodies, and the technological requirements for them in the design of all cleaning machines in this article.

Keywords: processing, fine cotton, large and small impurities, 1XK equipment, machinery design.

INTRODUCTION

A wide range of theoretical and experimental studies are being conducted to determine the optimal values of geometrical and kinematic dimensions in areas with high humidity and pollution, particularly in the improvement of the first processing techniques and technology of machine-made cotton, the theoretical basis of the process of cleaning cotton from fine and large impurities, and the basis of determining the optimal values of geometrical and kinematic dimensions in areas with high humidity and pollution in the world, especially in the improvement of the first processing techniques and technology of machine-made cotton, Simultaneously, it is critical to ensure the effectiveness of cotton cleaning and the preservation of the product's initial quality indicators, which includes the development of mathematical models that allow for the selection of the best cotton cleaning modes that do not degrade product quality and reduce the strong impact on cotton cleaning.

Measures are being taken in the Republic of Uzbekistan to improve the technical and technological equipment of cotton industry businesses, boost the profitability of processing cotton raw materials, and improve the competitiveness of the goods produced. The task of "increasing the competitiveness of the national economy, reducing the consumption of energy and resources in the economy, and widespread introduction of energy-saving technologies into production" has been defined in the Republic of Uzbekistan's action plan for further development from 2017 to 2021. Improvements to cotton processing technology, in particular, the development of an effective technology for separating impurities from it by cleaning it before storage, as well as a rational company that ensures high cleaning efficiency of working bodies,

and the development and implementation of soft-impact profiles on the basis, are all part of these tasks. President of the Republic of Uzbekistan's Decree on Measures to Ensure More Effective Organization of the Process of Acquiring Rights Over Land Parcels and Other Immovable Property as Part of the South Caucasus Pipeline Expansion Project – to some extent, this dissertation study will assist in the implementation of the tasks set out in the legal documents.

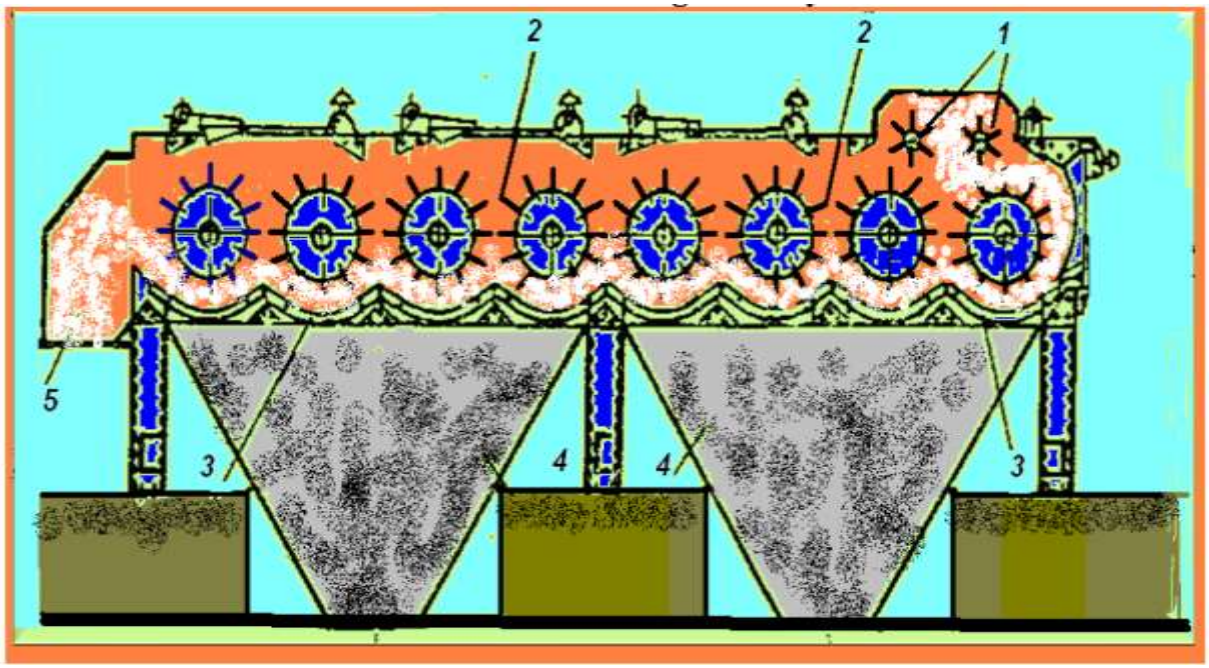
The processed cotton will contain big and minor contaminants, as well as mineral (mineral) additions. Impurities include leaves, horns, bands, flowerbands, currants, Chanak, cotton parts, ituzum, Ivy, sorrel, and other wild plant parts. Soil, dust, sand, and stones, as well as metal pieces, make up mineral inclusions.

Large impurities are frequently distributed on the cotton pieces' surfaces, where they are loosely connected with fibers and can be easily removed. Tiny contaminants find their way into the additional cotton bits and form a strong bond with the fibers. As a result, a few strokes and shaking effects are required to differentiate them, particularly minor contaminants. Even though, the majority of their domains remain in the fiber, with card and combed comb operations being totally separated only in the spinning industry.

Because large and small impurities found in cotton differ not only in size, but also in technological properties such as places of residence, the strength of their connection with fiber, and the description of the asset or passive, cotton cleaning machine structures are evolving in two main directions:

1. Cleaning machines for cotton from large impurities;
2. Machines for cleaning cotton from fine impurities.

If we consider the cross- and general view schemes of the equipment 1XK, the hopper is made up of eight pile-planetary drums, each of which is 75 mm long and has a diameter of 12 mm. After both rows of piles, a series of planks of the same height is affixed. A mesh surface has been put beneath the drums.



1XK type compact cotton small scale laundry cleaning equipment scheme and general appearance.

1-supply valve, 2 - pile drums, 3-mesh surface, 4 - impurity bunker, 5-purified cotton drop nov. A cotton loading shaft is used to convey the equipment to the feeder shafts (1). Cotton is delivered to the pile-planked drums by feeder rollers. It has a number of turns ranging from 0 to 20 (ayl/min) and is coupled to the IVA transmitter. Cotton wool is poured and crushed with heaps on the pile-plank Drums (2) before reaching the gauze Surface (4). Cotton wool with seeds is shaken and cleansed of minor contaminants as a result. Planks provide sufficient air movement, while contaminants separated by a mesh surface fall into bunkers (3) and are collected by a collector. The cleaning efficiency of the equipment is determined in percentage terms by the ratio of the mass of the mixture separated from the cotton dropped on the equipment to the mass of the cotton wool:

$$K_M = \frac{C_1 - C_2}{C_1} \bullet 100 \quad \%$$

that: Before and after washing, the degree of contamination of cotton (C1, C2). Work productivity, humidity, and seed contamination of cotton all have an impact on the cleaning efficiency of the equipment.

The ability of the working parts to work is critical in the process of cleansing cotton of contaminants. Cleaning machines remove fine and big contaminants from cotton, resulting in clean machines. The parameters of the selection grade, industrial grade, moisture level, fiber length, period of mixture addition to the cotton, and type of adherence to the fibers all influence the process of separation of mixtures from coarse cotton.

The method of exposing the machine working bodies to cotton with seeds determines the effectiveness of cleaning cotton from impurities: shaking of cotton wool on a mesh surface or interference of air flow during cleaning, dynamic effect of pile or planks on cotton with seeds, and how tightly and combed cotton pieces of sawdust drums. The effect of cleaning machines on the working bodies of cotton seeds is dependent on a number of factors, including the cleaning machine's working performance, the speed at which the working parts rotate, the technological intervals between the working parts, their construction, and the frequency with which cotton seeds are cleaned.

Individual and battery-operated fine-grime separation machines are divided into single-acting and re-acting in terms of the effect of working bodies on cotton with seeds, single-drum and multi-drum depending on the handle of the working bodies, and drum and cord-type in terms of construction based on the account of the installation of fine-grime separation machines on the technological line.

On drums and skewers made of cotton wool, finely chopped artichokes are thoroughly cleaned. The mesh surfaces might be formed of steel wire, eye-catching tin in various forms, or a combination of the two. The following technological standards are enforced on all cleaning equipment when they are designed:

1. Achieve high cleaning efficiency by reducing the number of working drums as much as possible with the aim of less mechanical impact on the raw material being processed.
2. The cleaning efficiency of the technological machine is high, so as not to let it decrease with the increase in working efficiency.
3. Do not adversely affect the natural properties of fiber and sawdust in the cleaning process.

4. Achieve high work productivity with high cleaning efficiency.
5. To create an automatic control system for the cleaning process.

CONCLUSION

The technique of cleaning cotton wool from fine and large contaminants was researched in stages, it might be said. Obtaining repeated results helped to identify the technique for carrying out the experimental research activity. Samples were obtained from the cotton poppy peeled from the stacks, and the results of the start-up and follow-up were verified in the laboratory equipment in order to carry out the experimental work on the device, to assess the quality indicators and cleaning efficiency.

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