

Scientific Analysis And Results Of The Stone Crucible

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Abstract: The article presents scientific analyzes on the stone crucible. A new design of the scoop is proposed, and the effect of the built-in deflector device on the efficiency of catching small stones in cotton is experimentally studied. When the cotton material enters the stone holding chamber, it is hit by a returner (otrajatel) installed in the chamber to separate small stones and other impurities such as sand among the cotton. The front part of the returner is equipped with self-rotating rollers, and the distance between the rollers is 10 mm smaller than the size of the cotton pellets.

Keywords: Retort, stone, dimensions, sand, heavy mixtures, retention effect

Introduction

Today, in order to catch heavy impurities in cotton ginning enterprises, in the technological process, linear separators installed in front of the separator of the pile pneumatic transport system are widely used. Linear heaters have a number of advantages over other heaters, such as simplicity of structure, ease of use, low cost and reliability. Their principle of action is based on the suspension speed of cotton raw materials and heavy mixtures. If the suspended speed of 0.2 g cotton pieces is 3 m/s, that of unspun pieces is 6 m/s, and the suspended speed of 1.4 g cotton pieces is 4-5 m/s, well-opened cotton raw materials The suspension speed of those up to 12 g is 8 m/s. The suspended speed of pebbles with a mass of 1 g to 40 grams is 22 to 40 m/s, stones with a mass of 40 g to 125 grams are 33-50 m/s, brick fragments with a mass of 60 g to 550 grams are 25-38 m/s [1, 2, 3, 4, 5].

The reliable movement of cotton raw materials in the air pipeline is carried out at an air flow speed of 30 m/s [6, 7], therefore, to catch heavy mixtures, the air speed in the catching chamber should be reduced by 2 times. For this reason, the width of the tube chamber is 15-30%, and their cross-section is twice as large as the air tubes. In addition to

Materials And Methods

In T.Mahametov's research, "pockets" of different widths are used to increase the holding efficiency of the traps, and he

the difference in the suspended speeds in the linear mills, the difference in the recovery coefficients of raw cotton and heavy mixtures is also taken into account. The coefficient of recovery is characterized by the elastic properties of objects in relation to impact and, accordingly, their reflection speed from stationary obstacles. The coefficient of recovery for stones is on average 0.7, for pieces of cotton, 0.2, that is, the reflection speed of stones is 3.5 times higher than that of raw cotton, which ensures that the stones are separated from the composition of raw cotton when they hit a fixed obstacle. Therefore, in linear hoppers, it is usually used to change the direction of pneumatic transportation of cotton raw material from horizontal to vertical, as a result of which, when the flow rotates in the horizontal direction with inertia, the cotton raw material and heavy impurities move and hit the wall of the hopper chamber. In this case, the pieces of raw cotton are broken up and heavy impurities are separated from them, which increases the capture efficiency, but at the same time it causes a small part of the cotton raw material to enter into the captured heavy impurities. Today, stone pillars are divided into two types depending on where they are installed. The first is the line stones. They are located in the line of the air conveyor and are installed up to the separator. The second is non-linear separators, which are installed after the separator.

proposed to increase the holding efficiency by increasing its width. This causes an increase in the amount of cotton pieces in addition to heavy impurities falling into the pockets.

Ways to increase the efficiency of the stone probes without increasing the pocket distances have been sought in order to prevent the accumulation of cotton particles with the stones.

When the cotton enters the stone holding chamber, it is hit by a deflector (otrajatel) installed in the chamber to separate small stones and other impurities such as sand among the cotton. In the front part of the deflector, self-rotating rollers are installed, and the distance between the rollers is 10 mm smaller than the size of the cotton flakes. Fig. 1. Small stones and dirty impurities between the cotton hit by the rollers 2 pass between the rollers 2, fall down through the pipe 4 into the collecting chamber, and the cotton is soaked down by the rollers and passes through the bottom of the returner and continues on its way [1,2].

Result and discussion

In the process of historical and cultural development and the development of philosophical ideas, the concepts of tolerance have undergone various changes. This situation is natural, because the society has been changing and attracted people to different ideas in different periods.

It is impossible to fight against extremism in the Republic of Uzbekistan without forming concepts of tolerance among young people. Measures are being taken to find new opportunities for the development of tolerance education in educational institutions. For this, all educational institutions should unite as a single pedagogical complex around this goal. In the conceptual framework of the modernization of the educational content in the period until 2010, it should be considered as a priority goal to accelerate the education of tolerance. It is important to look for ways to rationally use innovative technologies entering the field of education in the formation of concepts of tolerance in children of primary school age.

Tolerance skills are formed, strengthened and expanded as a result of the formation of similar attitudes towards existence, the formation of points of view, and the development of ethically oriented social behavior. In the same way, the foundations and principles of social behavior and conscious behavior begin to form in the minds of young people.

Intellectual power and desire to acquire tolerance skills increases. During this period, students understand the environment that surrounds them as true consciousness. It is

important to take into account the education of tolerance in the environment that surrounds them. As a result, a person notices and feels the mistakes in his behavior and eliminates them as much as possible. As children grow up, they often have capriciousness, stubbornness, negative and uncertain moods and situations. At such times, it is important to be patient with people in the environment created in them, and the skills of tolerance are important. Otherwise, in such situations, contradictions and disagreements may arise, and sometimes they may even gain a wider scope. That is why it is necessary to take educational measures aimed at eliminating such moods in students during the period of primary school education [2].

Such contradictions revealed as a result of our observations make it necessary to arm students with concepts of tolerance from the early school years, to find convenient forms, means, methods and methods of inculcating these concepts in their minds, and to scientifically justify them.

Of course, the proposed forms, tools, methods and methods require a deep analysis of the educational process and its content.

First of all, the principles and means of tolerance education should be scientifically based. The analysis of the process of implementing tolerance education showed that it is necessary to find effective methods and tools of tolerance education in order to attract the attention of students and teachers to this urgent issue. It is also required to determine the forms and technological peculiarities of tolerance education [3].

The formation and development of a person takes place in connection with the life of society and the interaction of people in it. Because every person, as a social being, engages in active, social communication with other members of society. Only then society and the individual will develop equally in mutual relations. And tolerance is a powerful factor that ensures the same social communication [4].

For example, most of the contradictions in life arise from the fact that members of society do not understand each other and cannot tolerate each other. One of the important tasks of the educational process is to teach students to be patient with others. Therefore, the "Declaration of Principles of Tolerance" states: "Tolerance is a tool that makes it possible to achieve peace, leading from a culture of war to a culture of peace."

Cultivating a sense of tolerance is important because today the economic, spiritual concepts and values necessary to improve society and people's lifestyle and ensure independent development can be instilled in students from the first stages of education. It consists of:

- mastering the ethics of not forcing the

student to acquire one or another concept, view, values;

- deciding to have a tolerant and reasonable attitude towards the culture, religion, and values of other nations;

- to teach the student from the first stages of education to communicate with others based on the conditions of mutual understanding;

- inculcate in students the ability to patiently listen to the opinions of others, encourage them to solve problems on the basis of mutual compromise;

- to teach the fundamental nature of peace-loving, ethnic, religious, political, confessional (a religious denomination is a group of people who believe in a particular religion)[127-26] and interpersonal disagreements, egalitarianism in forming the concepts of tolerance in students.

When tolerance is considered as a specific behavior, it is a healthy attitude of the student to limit himself and not consciously engage in immoral activities. Tolerance means, on the other hand, a voluntary attitude towards mutual tolerance, tolerance and tolerance between different religions, cultures and nations [5].

Due to the fact that the science of pedagogy embodies a very large scientific reserve of teaching resilience, the Uzbek people have been living for centuries as a bright example of resilience. School, especially primary education, is an important source of forming concepts of tolerance. Education of young students in the spirit of tolerance is one of the important tasks facing school education today. Building resilience in students is closely related to fostering a sense of internationality [6].

Experiments were carried out on cotton processed in the Dostlik cotton ginning enterprise of Jizzakh region, namely Bukhara-102 selection grade, P-industrial grade, raw cotton raw material with initial dirtiness of 9.8%, moisture content of 8.6%. During the experiments, the movement of air in the air pipes was ensured to be uniform and constant as much as possible. The cotton was transferred from the gin to the air pipe with manual forks, while the cotton transfer was constantly monitored to ensure the efficiency of cotton transportation in the air pipes at 8-10 t/h. During the experiments in order to study the work of the rollers, it was performed in two versions, with the roller face closed and open. Experiments were carried out according to the developed method, up to 10 mm, 10-20 mm; 20-30 mm; Stones of 30-40 mm size

were taken, painted in different colors, transferred to the passing cotton, and the stones caught in the stone table were counted according to their size.

Experiments were conducted adjusting the installation distance h (Fig. 3) to 400 mm, 350 mm, 300 mm in both variants of the reflector.

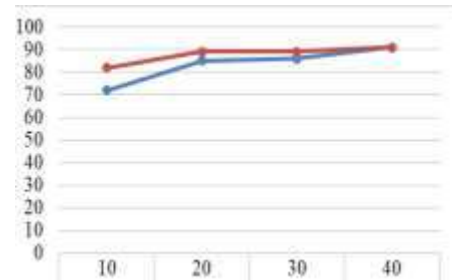


Figure 2. Effect on capture efficiency when the distance of the reflector in the camera is set to 400 mm.

When the distance h in the chamber is adjusted to 400 mm (Fig. 2), from the experimental results in the case where the rollers are not installed in the front part, the efficiency of catching the stones up to 10 mm was 72%, stone sizes 20; 30; 85 to catch up to 40 mm; 86; It was 91%. Experiments by installing rollers on the front part of the reducer showed that the size of the stones was 10; 20; 30; Up to 40 mm catch effect 82; 89; 89; It was found that the efficiency of catching small stones was 91%, and the efficiency of catching small stones was high up to 10%, but lowering the otaratel to a distance of 400 mm caused the cotton to pass close to the stone collection mechanism in the chamber from blocking the cotton path, and cases of cotton pieces falling with stones were also observed. In order to reduce these situations, raising the deflector higher, the distance h was adjusted to 350 mm, and experiments were conducted

It can be seen from the 3rd picture above that in the state of the roller without the roller, the size of the stone is 10; 20; 30; Up to 40 mm, the efficiency is 70; 77; 87; It was 89%. The efficiency of keeping stones up to 10 mm in size when the reducer is installed in the chamber with a roller is 12% higher than in the case without a roller, 20 of the size of stones; 30; and up to 40 mm, the holding efficiency is 85; 93; It is 96%, which is 9% to 7% higher than roller-less conveyor. In this case, it was observed that a few pieces of cotton were passed through the stones coming out of the stone collector, and this condition can be said to be satisfactory.

In order to completely remove the stone and the cotton piece in the stone collecting device, the otaratel was lifted up in the chamber, adjusted to 300 mm, and the cotton path was opened again Fig. 4.



Figure 4. Effect on capture efficiency when the distance of the reflector in the camera is set to 300 mm.

From the graphs in Figure 4, it can be seen that in the state of the otrajtel without rollers, the stone sizes are 10; 20; 30; The effect of keeping up to 40 mm is 61; 67; 81; It is 86%, and in the case of rollers, the holding efficiency is 78; 82; 86; 89%, compared to 17 without a role; 15; 5; 3% was found to be higher, but a few pieces of cotton were observed in the stone collection chamber.

From the experiments, it can be seen that the more the distance of the filter in the chamber is increased, the more the efficiency of catching small stones increases, but it is observed that the pieces of cotton fall into the stone collection device due to the blocking of the cotton path.

Conclusion

In the world, a number of researches are being carried out on the creation of devices and technologies for cleaning raw cotton from small and large impurities, including in the following priority areas: creating a control system for the repetition of cleaning raw cotton from impurities; increase the profitability of enterprises due to the implementation of new resource-efficient cleaners; creation of variable automated systems of cotton raw material cleaning process; development of effective technology of cotton raw material cleaning process and rational construction of working parts of cleaners; creation of effective non-fast-food technological working parts of cleaners; it is important to develop adaptive technologies according to the initial quality indicators of cotton raw materials.

At present, CHX and UXK cotton ginning machines use the same device with a moving brush to hang the cotton on the surface of the saw drum [1].

This is a device with a vibrating brush, made of wood and many kapron threads woven into its holes. Five brushes are placed in a grooved metal device and bolted together

to form a complete roller brush assembly. the main drawback of the existing cleaning device is that the brush kapron threads, which are a part of it, do not have sufficient hardness and are quickly eaten. In the initial state, the gap between the kapron thread and the saw teeth is 0-2 mm. will be.

The proposed lifting device consists of three rods 4 with a circular cross-section, and for the lifting and cleaning process, it is parallel to the saw cylinder between the guide tray 3 and the first cleaning column grid 6 in the direction of the saw cylinder 5. is installed. Due to the fact that the distance between this device and the surface of the sawing drum corresponds to the geometric dimensions of the cotton, the cotton is attached to the surface of the sawing drum. The laboratory equipment works as follows: cotton is transferred to the pile drum 2 with the help of supply rollers 1, the cotton raw material falling on the surface of the saw drum 5 through the squeegee guide tray 3 enters the process of moving between the surface of the saw drum and the first boom of the roller, cotton pieces that have not had time to be picked up are in contact with the surface of the saw drum in the second stage, the same process continues in the third stage, and all cotton raw pieces are reliably hung on the surface of the drum until the 6 first cleaning stage of the coulter grid. In addition, the pieces of cotton in contact with the moving sturgeons move impulsively during the passage between the sturgeons, and small dirty impurities are released from them. Cotton raw material on the surface of the saw drum is cleaned as a result of the action of the colosnik grid 6, then it is separated by the separating drum 7 and transferred to the pile drum 2.

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