

IMPROVEMENT OF THE CONSTRUCTION OF THE 2-CHTL STONE CATCHER USED IN THE COTTON CLEANING PLANT

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Abstract

The principle of operation of the air conveying device is that the atmospheric air, under the flow created due to the pressure difference, pushes the material being transported along with it into the pipe. The cotton moves in absolute condition in the pipe and reaches the separator.

Keywords: air flow, pipe, air pressure, mesh surface, air distributor.

Introduction

The advantage of the transport device with the help of suction air is that it is possible to easily change the working pipe system depending on the location of the storage areas of the cotton ginning enterprises, and the pneumotransport length can be extended by connecting additional pipes to the initial pipes. The production efficiency of the air conveyor depends on the production capacity of the cotton gin [1-3].

The composition of seed cotton significantly affects the efficiency of the installed technology in the technological process of cotton ginning enterprises, their continuous operation. Heavy impurities in cotton during its processing cause damage to working parts of cleaning machines and saw teeth of gins and linters. Such a change causes damage to the seed and fibers during the extraction of fiber from the seed in the ginning machine [4-6].

The main part

This causes a decrease in the cleaning efficiency of the cotton cleaning machines and the addition of impurities to the cotton in the waste. In addition, heavy impurities are the cause of fire as a result of hitting metal working bodies of processing machines. Because of this, the entrapment of heavy compounds in the working chambers of cotton processing machines has always been the focus of scientists and industrial experts in the field, who have sought ways to keep the heavy compounds fully contained in the air conveyor. .

D.L. Kelbert identified the causes of fires in the saw teeth of cotton gins, gins, and linters during the process of separating fiber from seed. It was determined that metal fragments (nails, nuts, washers) contained in heavy alloys are the main cause of this. The composition of the heavy impurities captured by the stone separators installed in the technological process of cotton gins is shown.

The principle of operation of the air conveying device is that the atmospheric air, under the flow created due to the pressure difference, pushes the material being transported along with it into the pipe. The cotton moves in absolute condition in the pipe and reaches the separator. The separator separates the material from the carrier air and transfers it to the next technological equipment [5-7].

The advantage of the transport device with the help of suction air is that it is possible to easily change the working pipe system depending on the location of the storage areas of the cotton ginning enterprises, and the pneumotransport length can be extended by connecting additional pipes to the initial pipes. The production efficiency of the air conveyor depends on the production capacity of the cotton gin. For an advanced ginning plant with one battery, it is 10 tons per hour.

The task of increasing the production capacity, increasing the productivity of the equipment, and improving the quality of the products has been set before the cotton processing industry. The performance of these tasks is more dependent on the operation of the air-borne transport device installed in the area. Because it is directly included in the continuous technological process of the cotton ginning enterprise, and it is considered an important part that determines its initial and work pace.

The coolers 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.

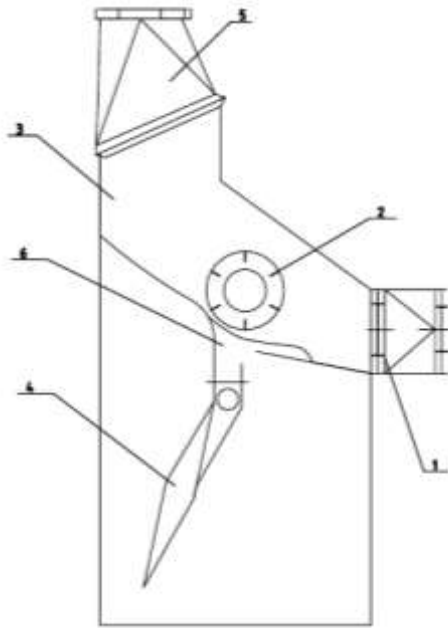


Fig. 1. 2CHTL Heavy Mixture Catcher

1- seeded cotton transfer pipe into the device, 2- aspiration chamber, 3- return wall, 4- catch from heavy mixtures, 5- seeded cotton transfer pipe from the device, 6- observation hatch.

Remove heavy impurities and metal fragments from the cotton as much as possible. it was necessary to study the movement of cotton in the separation chamber of devices created for the purpose of trapping. The aim is to determine the trajectories of cotton and heavy mixtures in the working chambers of the newly created multi-pocket radial and cylindrical stone crushers. With the help of this trajectory, it will be possible to determine the location of the pockets and elastic plates in the working chamber.

Conclusion

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