

IMPROVEMENTS TO THE 5LP LINT SEPARATOR

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Annotation: As a result of the improvement of the 5LP type linter equipment adjuster, we can improve the cleaning efficiency of the linter equipment to a certain extent and achieve higher-quality fluff.

Keywords: Working camera, seed, raw material, 5LP, cleaning, fluff, quality.

The seeds, separated from all the fibers, lose their ability to stick together, in order to maintain a good state, and for a better direction of the cleaned fiber, they are separated from the seeded cotton roller between the saw cylinders, and fall to the surface of the colosnik and then down its slits. The seed from the gin must be cleaned before linting. Because small stones and impurities are mixed between the seeds. The seed must first be cleaned to ensure that the fluff from the linter is clean. In addition, if the seed is not cleaned, after falling into the linter, the stones contained in it will affect the saw teeth in the linter and adversely affect the seed. The linting process consists of 2 lines, 5 5LP in the 1st line and 5 5LP in the 2nd line. The number of saws is 160, the number of saw teeth is 330, the diameter of the saw is 320 mm.

The difference between the linter and the genie is that the device is installed in the working chamber. Saw teeth are sharpened on one side instead of two sides. A density valve is installed in the working chamber of the linter, and if the amount of seed in the working chamber increases, the density valve is pushed and the speed of the supply representatives is adjusted.

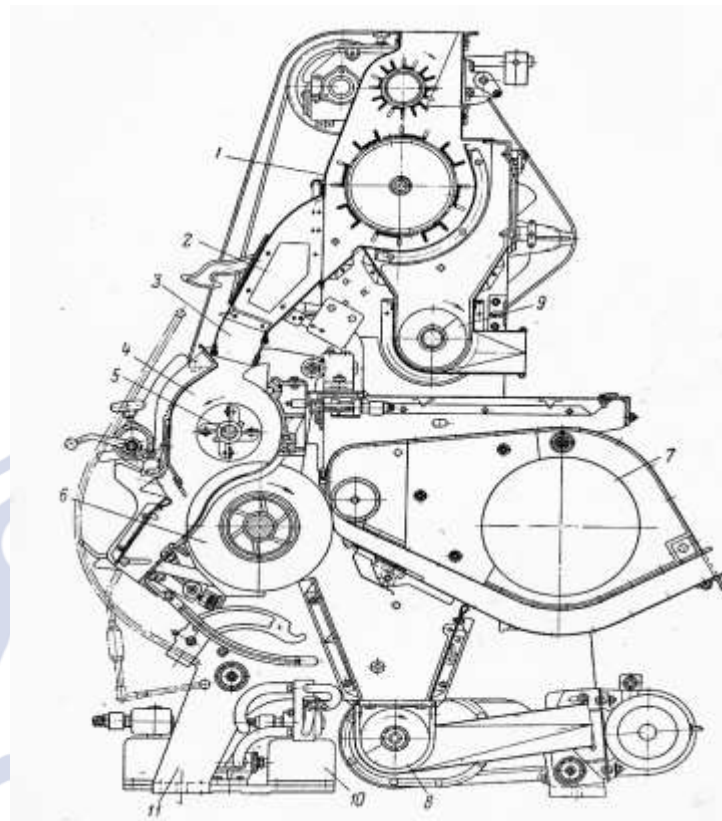


Figure 1. 5-LP type linter

1-KPP model supplier; 2nd seed making rod; 3. A rubber barrier that prevents the return of the plug from the working chamber; 4th working (seed) chamber; 5th adjuster; 6-saw cylinder; 7th air chamber; 8-thousand conveyor; 9th waste conveyor; 10-electropereklyuchetel; 11th base;

The proposed part accelerates the process of extracting fluff from the seed by moving the raw material roller in the existing equipment. The difference between this equipment and the previous equipment is that in the existing equipment, the trimmer moves in one line in the same clockwise direction, while the working body we proposed is installed in a different direction relative to the axis, so the working the seeds in the chamber rotate in different directions every time they collide with the saw cylinder, and the piles on the side allow you to move the raw material to the side.

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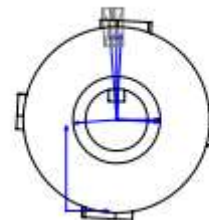
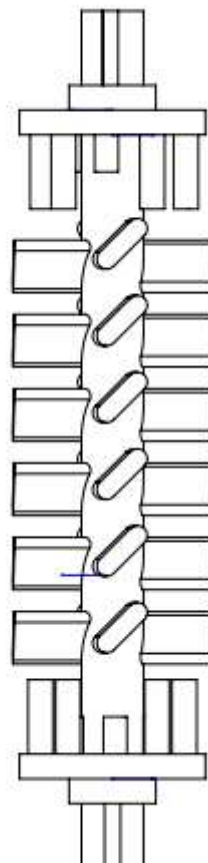


Figure 2. Technological calculation of the prepared cleaner.

5- The process of lintering in the LP equipment is performed as follows: the seeds are fed to the drum with a pile plate with the help of the seed receiving shaft of the KPP type feeder mounted on the linter. Due to the rotation of the drum, the pile and planks drag the seed over the surface of the mesh with 2.5 x 3 mm holes, it is cleaned of small impurities in the amount of seed, and it flows evenly along the length of the feeder tube into the working chamber of the linter. The reason why the seed falls into the working chamber of the linter at the same time and is intensively stirred is the checkerboard arrangement of the pile-planks and their rotation at the



same speed. Under the influence of the rotating saw cylinder and the trimmer in the working chamber, the seeds are compacted in a rotary roller. The saw teeth pierce the rotating shaft of the seed and snag or scrape off the fibrous mass on the surface of the seed, which is called fluff.

Summary

In this article, we managed to increase the cleaning efficiency of the Linter equipment in the process of linting the seed cotton. I think that this research will benefit the cotton industry by further improving the equipment.

It is taken into account that the efficiency of the purifier depends on the raw materials in the working chamber. Cast iron is used in the updated cleaner. Even if the updated part is longer, the price will not change much. While the price has not changed, the performance of the upgraded cleaner will increase.

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