

5LP- INCREASE WORK EFFICIENCY BY CHANGING TO LINTERING EQUIPMENT

U. Toyirov

Assistant of the "Natural fibers" department, Fergana Polytechnic Institute

Annotation: To improve the efficiency of the 5LP type linting equipment by adding a filter and placing a mesh surface to separate small impurities from seeded cotton. The linting we offer is a linting process that comes after the ginning process. 5LP in this process aims to separate the impurities by applying a stringer surface to the linter equipment.

Keywords: linter, 5LP, mesh surface, dirt, seed, cotton, ginning, small dirt, efficiency, supply valve, working chamber.

Introduction

The process of separating cotton wool, i.e. lint, from the seed is called linting. This is called a linter when done on hardware. Linters also have a seed chamber delimited by an apron, a seed comb, a colossal grid, and a pestle brush. Linting of seeds is carried out in this chamber. An air flow system equipped with devices to separate the lint from the saw teeth [1-5].



Figure 1. 5LP linter equipment

The main function of the linting process in cotton gins is to mechanically separate the fluff from the surface of the seed with saw teeth. Linters are subject to the following requirements: seed and lint should not be damaged during linting, impurities and impurities should not be added to lint, the mechanism (instrument-equipment) that controls the quality of lint, the degree of hairiness of the seed, and the performance of the linter should work [6-11].

We can determine the separation of impurities in a certain amount by placing a mesh surface on the channel where the linted seed falls. Mainly due to the fact that lint is extracted from the seed, if we put a mesh surface, the dirt in the linter will be reduced by the ground seeds falling and we can achieve efficiency [12-14].

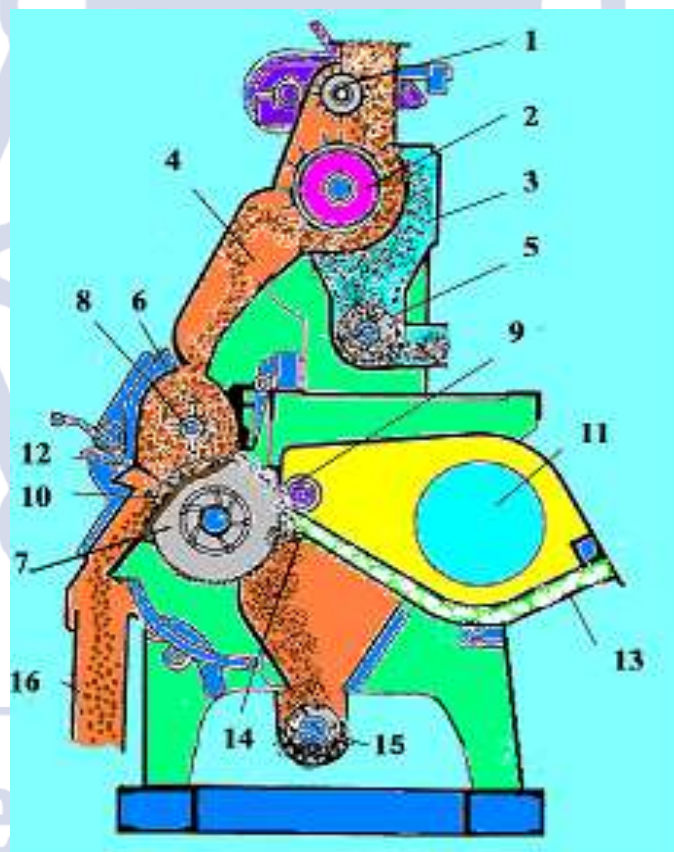


Figure 2. Technological process of 5LP type linter Scheme [3]

1. Supply shaft 2. Timing drum 3. Dirt hopper; 4. Sloping rod; 5. Dirt auger; 6. Working camera; 7. Saw cylinder; 8. Corrector; 9. Slot; 10. Colosnik; 11. Air chamber; 12. Seed comb; 13. Lint transmission pipe; 14. Hopper; 15. Screw conveyor; 16. Linter seed falling tube.



Since 1981, a new 5LP type linter (Fig. 2) has been developed with higher seed and lint efficiency and better lint quality. The linter also differs in that a seed receiver-cleaner (KPP) is installed. In addition, in the working part, the penetration of the saw teeth into the rib cage has been extended, the rotation speed of the trimmer has been increased (500 min⁻¹) and the surface of the working chamber has been enlarged, due to which the productivity of the linter in terms of lint is 100 kg/h and seed productivity is 2200 kg/hour, that is, the overall productivity has increased by 40 ÷ 55%.

Summary:

In conclusion, it can be said that it is very difficult to extract fiber from seed in cotton factories and to achieve efficiency. we increase efficiency through In addition, we can obtain clean and high-quality lint by increasing the efficiency of the lint.

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