

SAW GENIE PD SUPPLIER INCREASING CLEANING EFFICIENCY BY SUPPLYING HOT AIR TO THE DEVICE

Ergashov Yu. Urishev M.M.

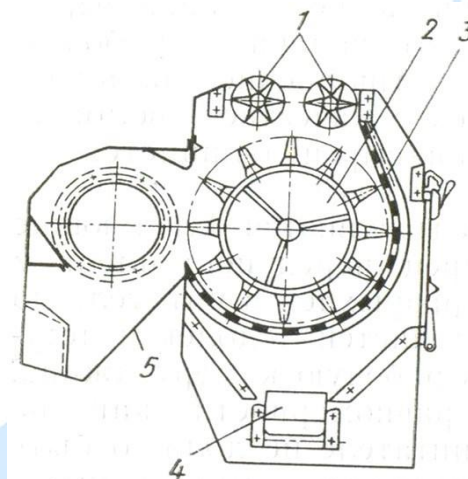
FERGANA POLYTECHNIC INSTITUTE

yuldashaliergashov@gmail.com urishevmurodjon3@gmail.com

Annotation: In this article, the improvement of the efficiency of cleaning cotton wool from small impurities by supplying hot air to the PD-tamin laminating device.

Keywords: Saw gin, Saw tooth geometry, Working chamber, Ginning process, Fiber, cylinder.

PD model gin supplier technological scheme of the equipment *In Figure 1.1*, kinematic scheme *In figure 1.1* given. The working process is as follows: seeded cotton falls into a mine installed on the feeder. Counter-rotating feed rollers (1) carry the seeded cotton evenly from the shaft to the pile drum, which drags the seeded cotton over a mesh surface (3) for final cleaning of the seeded cotton. . Cleaned seed cotton is transferred to the rod (4) by means of a drum with piles and falls into the working chamber of the gin. Separated dirt is removed from the equipment using a belt conveyor (5).[1]



PD model supplier equipment

Provider status; 2.Pile drum; 3.Mesh surface (surface);

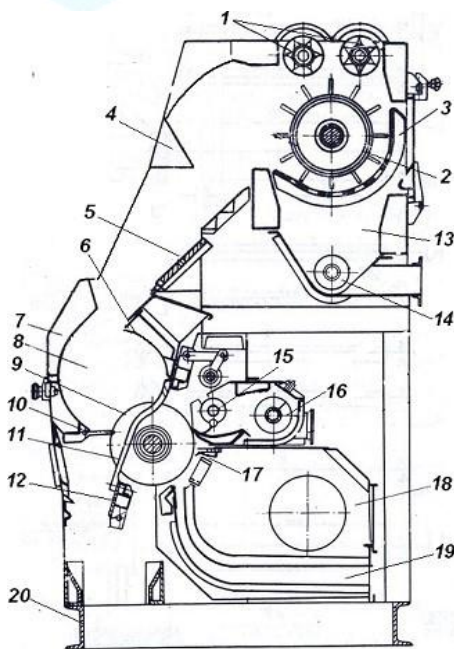
4- Garbage conveyor; 5-Nov;

Due to the fact that the rotation speed of the supply rollers (1) is adjusted by the IVA type pulse variator installed on the axis of this roller, the volume of seeded cotton transferred to the working chamber of the gin can be more or less, that is, it is possible

to control the working performance of the gin equipment. creates an opportunity. 3XDDM for separating the fiber from the seed of medium fiber seed cotton , DP-130, 4DP-130, 5DP-130 and DPZ-180 type sawing machines are used. All industrial grades of medium-fiber cotton with a moisture content of 7÷9% and IV, V industrial grades of long-fiber cotton are processed there.[2]

The structure of the chainsaw consists of the following working bodies and parts:

- working chamber (apron, seed comb, brush);
- colossal fence;
- saw cylinder;
- device for separating fiber from saw teeth;
- dead-separating kozerog;
- dirt conveyer;
- base (stanina) consisting of cast iron walls.



2-figure 4DP-130

Cross-section of a model sawtooth gin

1- supply rollers; 2-pile drum; 3-mesh surface; 4- guiding barrier; 5-magnet; 6- blade brush; 7- front apron; 8- working chamber; 9- saw cylinder (disc); 10- seed comb; Colossians 11; 12- lower bruce; 13th dirt bunker; 14-contamination and transfer auger; 15- waste removal device; 16- waste transfer auger; 17- thread; 18- air chamber; 19- fiber transmission pipeline.

4DP-130 chainsaw model (Figure 1.2) operation is as follows: The supplier cleans the cotton drum (2) from small impurities and gives the required amount of gin. In it, the cotton falls into the working chamber (6) and forms a roll of raw material, and

the saw teeth of the saw cylinder (7) catch the fiber and carry it through the colosnik (8).[3]

Since the gap between the colostrums is smaller than the size of the seed, only the fiber passes through. The fiber in the saw tooth is separated from the tooth with the help of the air coming out of the slot of the air chamber (13) behind the colosnik and delivered to the next process through the transmission pipe (14). When the fiber passes behind the colosnik, it hits the knife (11) installed behind the saw, and is cleaned of impurities, and they fall into the screw conveyor (15, 16) that takes away the pulp and is removed from the equipment.[4]

The PD provider we offer works as follows.

Counter-rotating feed rollers (1) carry the seeded cotton evenly from the shaft to a pile drum (2), which drags the cotton over a mesh surface (3) and crushes the seeded cotton into fine particles. clears the files one last time. Cleaned seed cotton is transferred to the rod (4) by means of a drum with piles and falls into the working chamber of the gin.

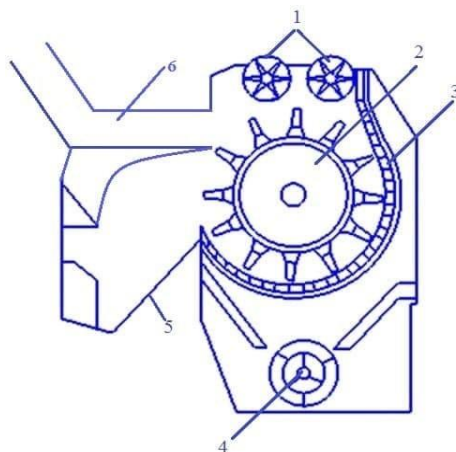


Figure 1.1. An improved version of the PD type supplier equipment 1.Provider status; 2.Pile drum; 3.Mesh surface (surface); 4- Waste conveyor; 5-Nov; 6-Air supply pipe.

Separated impurities leave the equipment through a conveyor (6). In order to increase the efficiency of cleaning the seeded cotton from small impurities, it is aimed to increase the efficiency of cleaning the supplier by providing additional hot air to the process of seeding cotton and reducing the amount of moisture.

The moisture content of the seeded cotton coming out of the primary drying drums is higher than that of the seeded cotton coming from the pipe cleaning section to the desizing section, and additional heating agent is used to deliver this moisture to 8% and remove small impurities from the seeded cotton. separation efficiency is increased by 1%. This leads to the improvement of the processes of separating cotton from the

seed, that is, the quality indicators of the fiber. 6.

Based on the experiments, it was estimated that the cleaning efficiency of the feeder is 3-4%, and by adding an additional heating agent to the agar, the efficiency of cleaning the feeders of the sawdust can be increased by 5-6%.

REFERENCES

[1] Yu. Ergashev, A. Sh. Khusanova, M. Babayeva. Analysis of dynamic characteristics of selective technology of sawing // FarPI Scientific-Technical Journal-Fergana 2020 №1 B.252-2555

[2] A. Sh. Khusanova. Optimization of geometric dimensions of ginning elements of selective technologies // FarPI "Journal of Scientific Technology" Issue 4. "Optimization of geometric dimensions of ginning elements of selective technologies" Fergana-2020 P.158-160

[3] A. Salimov, Sh. A. Khusanova. Analysis of experience in the introduction of modern information and communication technologies in ginneries. Republican scientific-technical conference International scientific-educational electronic journal. No. A3-21.10.2020.

[4] A. Salimov, O. Salimov, Sh. Khusanova, I. Khakimov "The problems of natural fiber and textile materials on fire resistance" Saarj journal Akademicia: an international multidisciplinary research journal April-2020. <https://saarj.com/wp-content/uploads/special-issue/2020/ACADEMICIA-JULY-2020-SPECIAL-ISSUE.pdf>

[5] O.Sh. Sarimsakov, NM Sattoriv, ZASiddikov, Sh.A. Khusanova. Improvement of the Process in Disassembling of Cotton Stack and Transferring the Cotton into Pneumotransport// International Journal of Advanced Science and Technology Vol. 29, No. 7, (2020), pp. 10849-10857

[6] Yu. Ergashev, A. Sh. Khusanova, O. Sh. Sarimsakov, Kh. Turdiyev, J. Oripov. Selective technologies of sawing Fergana Polytechnic Institute "Selective technologies of sawing madness" "Classic" publishing house-2020 ISBN: 978-9943-6662-7-6.