# HIGH PERFORMANCE AND MODERN CLEANING ANALYSIS OF TECHNICAL PROCESSES IN AGGREGATES

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## INTRODUCTION

In the "Development Strategy of New Uzbekistan for 2022-2026", signed by the Decree of the President of the Republic of Uzbekistan No. PF-60, including "... rapid development of the national economy and ensuring high growth rates and the Decree on doubling the production volume of textile industry products, 2017

Decision No. PQ-4186 "On measures to further deepen the reform of the textile and sewing and knitting industry and expand its export potential" and other regulatory legal documents related to this activity dissertation research serves at a certain level [1,2].

Abstract. The work carried out on the efficient use of raw materials in enterprises was studied. Analysis of technical processes in high-performance and modern cleaning-cleaning units, machine and equipment parameters in cleaning-cleaning were analyzed.

Key words. cleaning units, raw, ring, pneumo-mechanical, combing, spinning

In the first stage of the spinning plan, the spun fibers are prepared in the form of a uniform layer for carding machines through the processes of carding, mixing and cleaning. This task is carried out in cleaning-cleaning units on machines attached to one technological system (TTA). The composition of TTAs is selected (designed or accepted) depending on the degree of contamination of the used fibers, their length, and the range of yarn being spun. During the development of spinning technology, TTAs were separated according to the efficiency of purification on the CIS scale (low purification level - 24%, high purification level 50-55% and very high purification level - 70%). Due to the fact that the technological process in these TTAs is carried out with the help of strong impact, there is a high probability of fiber damage. The development of science and technology, the introduction of automated systems in spinning, and the increase in demand for product quality require frequent changes in the composition of TTA with efficient, compact and economical machines [3,4,5].There are various types of TTA used in textile enterprises of the countries of the world, and they can be summarized as follows:

Universal cleaning unit (UTTA)

1. Auto-tuning; 2. Retractable fiber taper; 3. Primary cleaning machine;

4. Mixing machine; 5. Main cleaning machine; 6. Aerodynamic cleaning machine; 7. Fiber distribution system.

As a result of the three-stage cleaning process at UTTA, the damage to the fiber product and the loss of long fibers combined with defects have been significantly reduced.

Parameters of UTTA machines are controlled and prepared by computer. The unit is usually used together with a waste separation and dedusting system.

This aggregate is considered universal and effective, and is used in the production of various raw materials, various assortments (ring, pneumo mechanical and re-combing) threads. Cleaning machines are equipped with single-drum working bodies, and it is intended to separate coarse defects without grinding. The teeth cleaning unit of the company "Truetzschler" is a "modular" device and can be divided into the following types according to the purpose of use short cleaning unit

- unit for cleaning long fibers
- universal cleaning-cleaning unit
- unit for cleaning chemical fibers
- high performance cleaning-cleaning unit

These aggregates have the following characteristics:

- The multi-functional device (detectors) carries out the tasks of identifying heavy particles and fibers of other colors, identifying metal objects, limiting and extinguishing fire;
- There are four types of cleaners that can be used separately or in combination.

- double-drum cleaner CL-P;
- single-drum cleaner Cleanomat CL-C1 for long fiber cotton fibers;
- three-drum universal cleaner Cleanomat CL-C3;
- four-drum cleaner Cleanomat CL-C4;
- mixing in three ways
- high performance universal mixer MX-U;
- mixer MX1 adapted for aggregation with different cleaners;
- MX-R hopper mixer.

- There are four options for provisioning.

The Contifeed system, which continuously conveys the cleaned product to carding machines, is used. The above mentioned cleaning units are effectively used in the textile enterprises of Uzbekistan. In addition to these, TTAs of different composition of "Marzoli" (Italy), "Balkan" (Turkey) and "Jingwei" (China) companies are also used [6].

## CONCLUSION

1. The influence of machines in the cleaning unit on fiber quality indicators was analyzed. The factors influencing the cleaning efficiency and level of cleaning were studied.

2. The working processes of cleaning machines manufactured by different companies and their working coatings were analyzed, and the recommendations for cleaning foreign impurities in the fiber were analyzed.

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